# vrf outline

Fujitsu General provides multi air conditioning systems for buildings AIRSTAGE™Series matched to the size and application of the property

A pleasant air conditioned environment matched to the needs is created by combining a wide variety of outdoor units, indoor units, and controllers.

# **Outdoor Units Line-up Page 110**







Systems for large homes to medium sized offices, shops

4HP, 5HP, 6HP 3 models

AIRSTAGE J-IIS

# **Heat Pump type for** heating or cooling operation



Systems for large homes to medium sized offices, shops

4HP, 5HP, 6HP 3 models

AIRSTAGE J-II

# **Heat Pump type for** heating or cooling operation



Systems for large offices, hotels, and large composite facilities

# 8HP-48HP 33models

• Space saving combination: 8HP to 48HP / 21 models

Various Easy-to-use Controllers Page 140

User's needs are supported by offering a variety of controls, such as individual control, central control, and building management control options.

• Energy efficiency combination : 16HP to 44HP / 12 models



# **Heat Recovery type for** simultaneous heating and cooling operation



Systems compatible with individual operation mode control, as well as large offices, hotels, and large composite facilities

# 8HP-48HP 34models

- Space saving combination: 8HP to 48HP / 21 models
- Energy efficiency combination : 16HP to 44HP / 13 models

AIRSTAGE VR-II

# Indoor Units & Ventilations Line-up Page 134

Capacity range 1.1 kW to 25.0 kW (J-II can be connected up to 14.0 kW.)











Wall Mounted

(EEV internal / EEV external)







Wall Mounted







200 26 7.



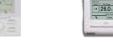
Remote Controller

Central

Remote Controlle



Available Summer 2014





Wired Remote Controller

(Touch Panel)

Wired Remote Controller



Touch Panel

System Controller Lite (Software)

NEW Outdoor Air Unit 3 models Page 166





Floor / Ceiling

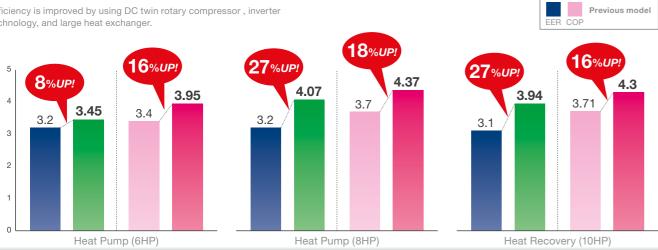




# vrf features

# **Highly Energy Efficiency**

Efficiency is improved by using DC twin rotary compressor, inverter technology, and large heat exchanger.

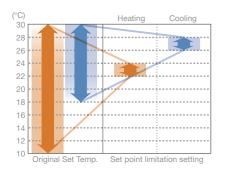


# **Features**

# **Energy Saving Function**

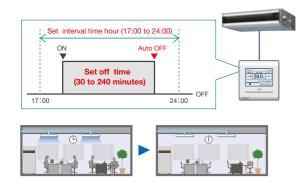
# **Room temperature set point limitation**

The minimum and maximum temperature range can be set giving further energy saving while considering the comfort of the occupants.



# **Auto-off timer**

- •The indoor unit automatically is turned off when it reaches to the preset operating time frame.
- $\bullet \mbox{The time}$  frame of the "Auto off timer" can be flexibly scheduled.

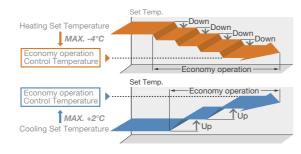


## **Economy operation**

Economy operation can be set by remote controller.

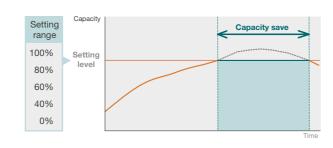
The temperature setting is offset automatically over a certain period

New model



# Capacity save operation

Operation capacity can be set in 5 steps for rated capability. The power consumption at peak is cut down and the maximum load is suppressed.





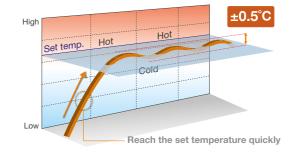




# **More Comfort**

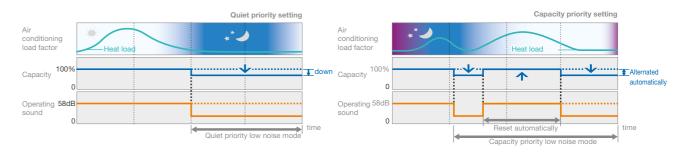
# **Precision refrigerant flow control**

Precision and Smooth refrigerant flow control is achieved by using a DC Inverter control in conjunction with individual indoor unit electronic expansion valve control. This allows for a high precision comfortable temperature control within  $\pm 0.5^{\circ}$ C of set temperature.



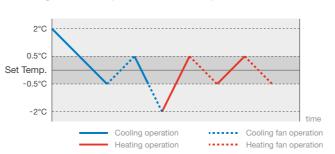
# **Quiet operation**

Low noise mode: Two low noise modes can be selected automatically by quiet priority setting and capacity priority setting depending on the usage environment and outside temperature load.

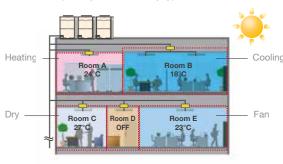


# Auto changeover function

At Auto setting, the cooling/heating mode is automatically switched according to the set temperature and room temperature.



# Suitable for especially Heat Recovery type



# vrf features

# **Features**

# **Design Flexibility**

# **High capacity connection**





AIRSTAGE™ J-IIS series Heat Pump type



up to 8

AIRSTAGE™ J-II series **4HP-6HP** Heat Pump type



nectable indoor unit capacity range 50%\*2 to 130%

Connectable indoo up to 9

8HP-48HP

AIRSTAGE™ V-II series AIRSTAGE™ VR-II series Heat Pump type Heat Recovery type

ectable indoor uni

capacity range

50% to 150%\*

unit number

up to 64



unit number

up to 48

\*1. Conditions of maximu connectable indoor unit capacity ration is as the chart below.

Outdoor unit	Maximum connectab	le indoor capacity ratio
capacity	Without 1.1 kW models	With 1.1 kW models *3
8HP-48HP	150%	130%
4HP-6HP	130%	117%(J-IIS), 120%(J-II)

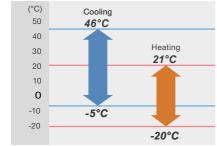
 $^{\star}$  3. In the case of connectable indoor units, 1.1 kW models and Cassette and/or Duct type of 9.0 kW class or more, maximum connectable indoor unit capacity ratio is 110%.

# Wide operating range

Installation in extreme temperature conditions is possible due to an increase in operational range.

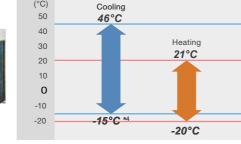
# Airstage™ J-IIS series Heat Pump type





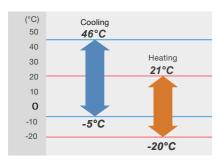
# Airstage™ V-II series Heat Pump type





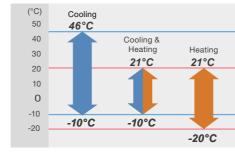
# Airstage™ J-II series Heat Pump type





# Airstage™ VR-II series Heat Recovery type



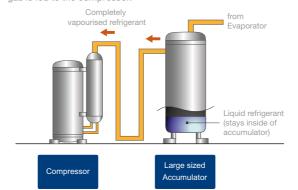


 $<sup>^*</sup>$ 2 Note : When a multiple outdoor unit connection is used, operating range is from -5°C to 46°C in cooling.

# **High Reliability**

# Liquid back flow protection

By adopting a large sized accumulator, the refrigerant which is not completely vaporized is left inside the accumulator and only a stable gas is fed to the compressor.



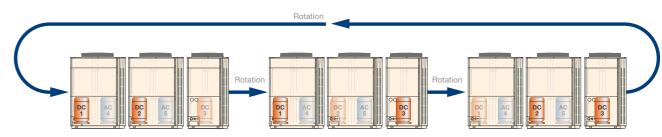
# Adoption of blue fin heat exchanger

Corrosion resistant of the heat exchanger has been improved by the introduction of blue fin treatment to the outdoor unit's heat exchanger.



# Life-extending operation\*5

The compressor starting order is rotated so that the running time is shared.

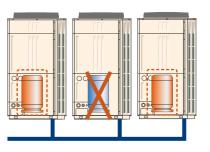


Note: The inverter compressors start in priority. Rotate operation is alternated by the start / stop timing of the compressors

# Backup operation\*5

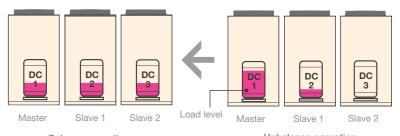
If one compressor fails, backup operation will be performed by the remaining compressors\*.

\*:Note: Backup operation may not be possible depending on the trouble state.



# Advanced Refrigerant Control\*5

Innovative compressor control logic has been introduced in order to balance the refrigerant mass flow rate of each outdoor unit by controlling the inverter speed.



\*5:Not available for AIRSTAGE™ J-IIS and J-II series

Unbalance operation Balance operation condition condition

# vrf features

# **Features**

# **Easy Installation**

# **Easily transported**

Easily craned using lifting belt hooks Design of outdoor unit allows for lifting straps to be used



Transporting by forklift Transport with forklift is possible.



Can be transported in a small elevator



Up to maximum length **3,600**m

## Easy access



Flexible installation by 4 way pipe direction



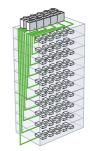
By adopting a L-Shape front panel that can be removed, the work space for installation and service has been significantly expanded by this new design. For multiple installations, work is performed

intervals by front access

# Simple wiring work

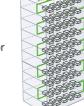
Installation of the wiring systems is made easier as the communication wiring can be installed continuously between the indoor, outdoor and RB units.

Note: Serial connection can't use the automatic address setting in a multiple refrigerant system.





easily and efficiently even in a narrow space.

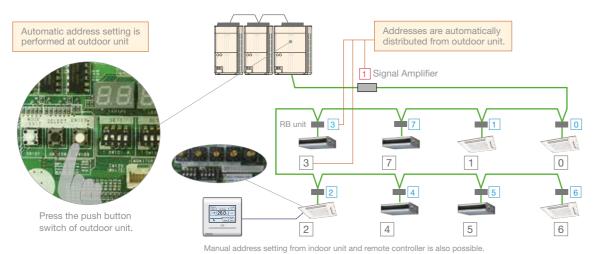


Parallel connection

Serial connection

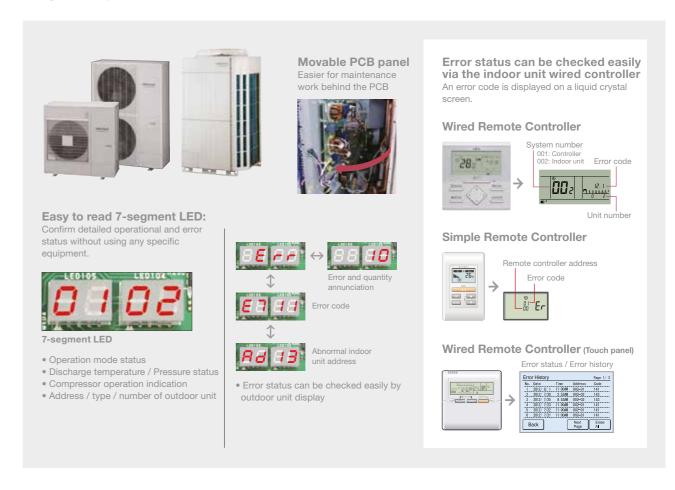
# **Automatic address setting**

The address of the indoor unit, RB unit and signal amplifier through the automatic function setting on the outdoor unit PCB.



# **Easy Service & Maintenance**

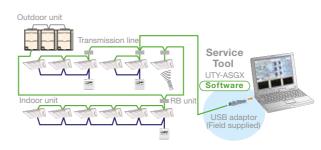
# **Design for Easy Maintenance**



# **Trouble diagnosis by Service Tool**

# Connection to Service Tool

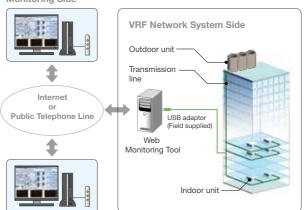
- Detail operation status and recent error history can be checked and analyzed by using the Service Tool.
- Last 5 min. operation memory can be also be recorded.



# Remote monitoring

The Web Monitoring system allows you view system operation at all times over the internet ensuring trouble free operation.

# Monitoring Side



The operating VRF network system in the building can be monitored real time over the Internet.

# J-IIS 2 pipe mini vrf

NEW Heat pump: AJY040LCLAH / AJY045LCLAH / AJY054LCLAH

Fujitsu General provides air conditioning systems for a wide range of applications from small office buildings and stores to large houses.



## **Features**

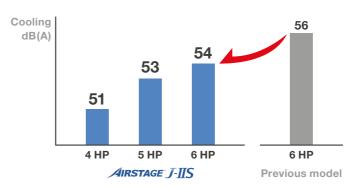
# It Can be Easily Carried and Installed Obscure Place

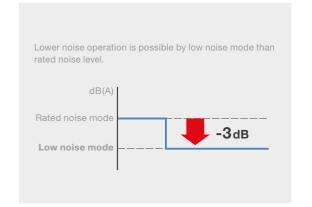


# **Features**

# Low sound level design

Significantly low sound level is improved by using DC twin rotary compressor, inverter technology, and advanced airflow structure design.





# Advanced high efficiency technology



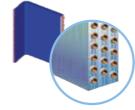
# Large propeller fan

High performance and low noise realized by large propeller and optimization of angle.



## DC fan motor

Miniaturized, low noise, high efficiency, multi-stage DC fan motor is mounted.



# Large heat exchanger

Heat exchange performance is substantially improved by mounting of 3-row large heat exchanger.



High heat transfer copper tube (Improved lead angle)



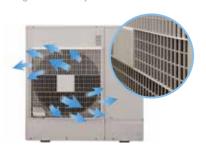
# DC inverter control

Efficiency is improved by mounting of new active filter module.



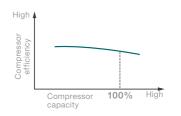
# Smooth airflow grille

This grille was aerodynamically designed for good efficiency with little blow loss.



# Compact and high performance DC twin rotary compressor

Efficiency in all load regions is good. Especially good performance from low to medium at normal operation.



# J-IIS 2 pipe mini vrf

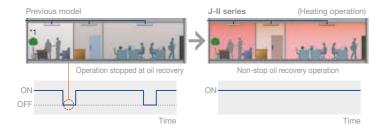
# **Features**

# Long piping length Our advanced refrigerant control technology allows us to achieve a total refrigerant piping Total pipe length length of 80 m. This opens up new possibilities мах. 80 т in system design. мах. **50 m** Height difference мах. **30 m** Height difference between indoor and indoor units Piping length from first separation tube to the farthest indoor unit мах. **15 m** мах. 40 т

# **More Comfort**

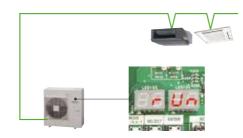
# Non-stop oil recovery operation

A comfortable room condition is maintained during oil recovery mode because the product continues to operate without stopping the cooling or heating operation.



# **Easier Installation**

Connection check function: Possible to confirm whether wiring connection and address setting are correct by a quick check run function.



- Display connected indoor unit numbers
- Duplicately set address number of indoor unit can be displayed

## **Specifications**

Rating Capacity Range		HP	4	5	6
Model Name			AJY040LCLAH	AJY045LCLAH	AJY054LCIAH
Maximum Connectable Indoor Un	nit		7	8	8
Power source	V/Ø/	/Hz	230/1/50	230/1/50	230/1/50
C 11	Cooling	kW	12.1	14.0	15.1
Capacity	Heating	kVV	13.6	16.0	16.5
1 D	Cooling	DAG	3.44	4.43	5.32
Input Power	Heating	kW	3.09	3.93	4.26
EER	Cooling	14/04/	3.52	3.16	2.84
COP	Heating	W/W	4.40	4.07	3.87
Air flow rate		m3/h	4,040	4,200	4,200
6 1 1 1	Cooling	ID(A)	51	53	54
Sound pressure level	Heating	dB(A)	54	55	56
Heat exchanger fin			Blue fin	Blue fin	Blue fin
	Height	mm	998	998	998
Dimensions	Width	mm	970	970	970
	Weight	mm	370	370	370
Weight	kg		86	86	87
C	Liquid		ø9.52	ø9.52	ø9.52
Connection pipe diameter	Gas	mm	ø15.88	ø15.88	ø15.88
Total pipe length			80	80	80
Ma. height difference		m	30	30	30
	Cooling	°C	-5 to 46	-5 to 46	-5 to 46
Operation range Heating		_	-20 to 21	-20 to 21	-20 to 21
List Price		£	2200	2400	2600

Note: Specifications are based on the following conditions.

Cooling: Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

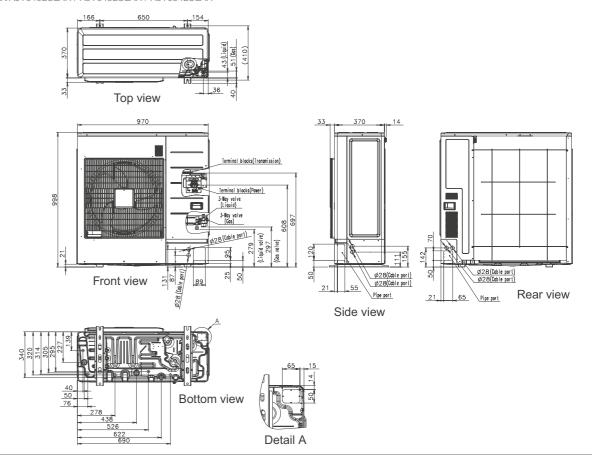
Heating: Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m.

The protective function may work when using it outside the operation range.

Dimensions

Model: AJY040LCLAH / AJY045LCLAH / AJY054LCLAH



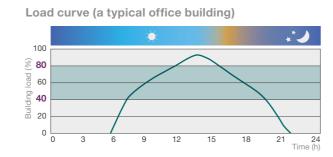
# Heat pump: AJYA40LALH / AJYA45LALH / AJYA54LALH

Fujitsu General provides air conditioning systems for a wide range of applications from small office buildings and stores to large houses.



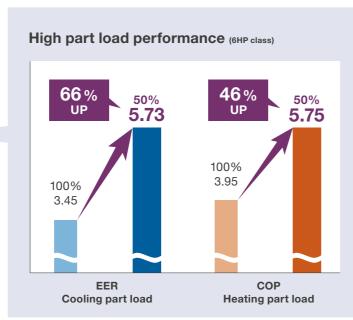
# **Features**

The building load is the range of almost 40 % to 80%. Therefore, most air conditioners do not operate at maximum load, but operate at low to medium loads. Especially, for multi system, operation performance at partial load is important because all the air conditioners do not always operate all the time. Aiming at energy saving performance matched to actual operation, Fujitsu General has developed a high intermediate performance air conditioner corresponding not only to the rated performance at 100% load, but also to low to medium load



# High EER / COP

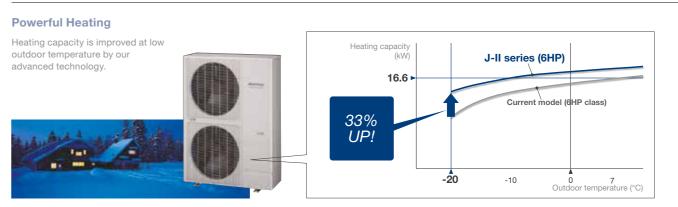




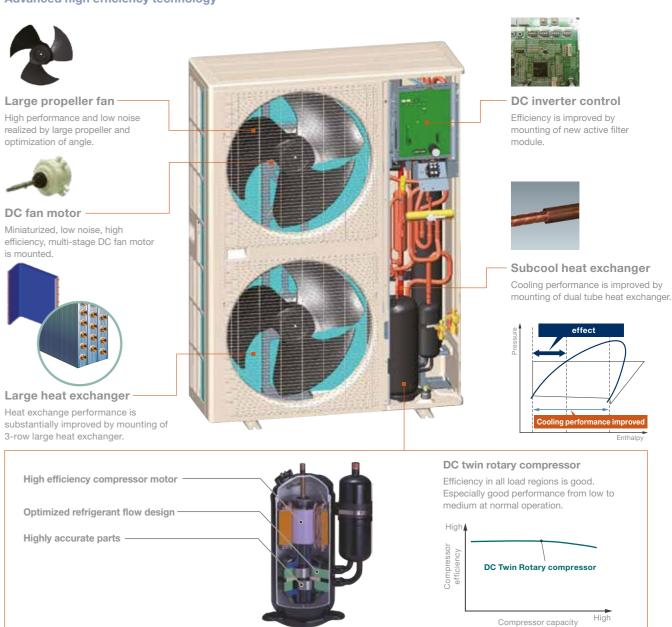
Conditions: Connected indoor units: AUXA30GALH+AUXD24GALH
Cooling: indoor temp. of 27°CDB / 19°CWB, outdoor temp. of 35°CDB / 24°CWB
Heating: indoor temp. of 20°CDB / 15°CWB, outdoor temp. of 7°CDB / 6°CWB

# J-II 2-pipe mini vrf

# **Features**



# Advanced high efficiency technology



# J-II 2-pipe mini vrf

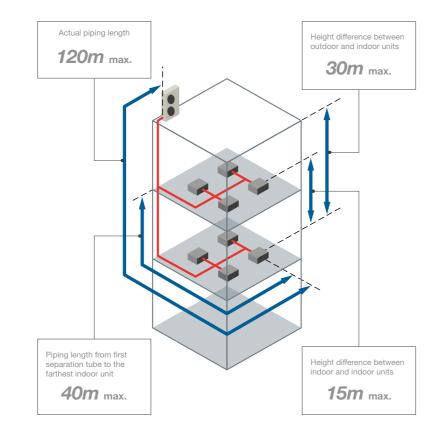
# **Features**

# **Long Piping Length**

Our advanced refrigerant control technology allows us to achieve a total refrigerant piping length of 180 m. This opens up new possibilities in system design.







# **More Comfort**

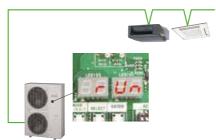
# Non-stop oil recovery operation

A comfortable room condition is maintained during oil recovery mode because the product continues to operate without stopping the cooling or heating operation.



# **Easier Installation**

Connection check function: Possible to confirm whether wiring connection and address setting are correct by a quick check run function.



- Display connected indoor unit numbers
- Duplicately set address number of indoor unit can be displayed

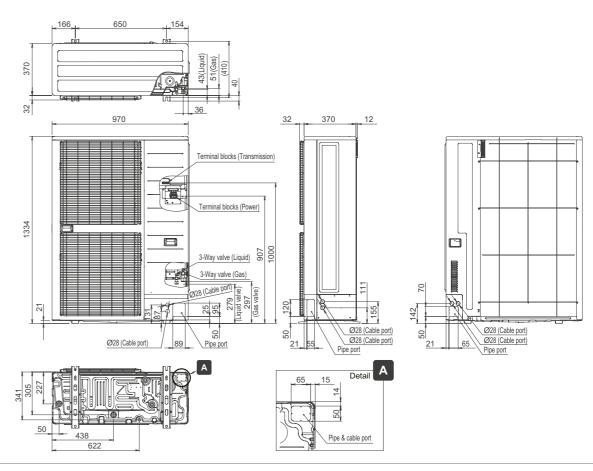
# **Specifications**

Rating Capacity Range		HP	4	5	6
Model Name	'		AJYA40LALH	AJYA45LALH	AJYA54LALH
Maximum Connectable Indoor Un	nit		7	8	9
Power source			230 / 1 / 50	230 / 1 / 50	230 / 1 / 50
Community	Cooling	kW	12.1	14.0	15.5
Capacity	Heating	KVV	13.6	16.0	18.0
1 . D	Cooling	kW	3.25	3.89	4.49
Input Power	Heating	KVV	3.17	3.81	4.56
EER	Cooling	\A(\A()	3.72	3.60	3.45
COP	Heating	W/W	4.29	4.20	3.95
Air flow rate		m3/h	6,200	6,400	6,900
c	Cooling	ID(A)	50	51	53
Sound pressure level	Heating	dB(A)	52	53	53
Heat exchanger fin			Blue fin	Blue fin	Blue fin
	Height	mm	1,334	1,334	1,334
Dimensions	Width	mm	970	970	970
	Weight	mm	370	370	370
Weight	kg		117	117	117
Refrigerant charge	kg		4.8	5.3	5.3
C	Liquid		ø9.52	ø9.52	ø9.52
Connection pipe diameter	Gas	mm	ø15.88	ø15.88	ø19.05
^ "	Cooling	°C	-5 to 46	-5 to 46	-5 to 46
Operation range	Heating	C	-20 to 21	-20 to 21	-20 to 21
List Price		£	3226	3581	3896

Note: Specifications are based on the following conditions. Cooling: Indoor temperature of  $27^{\circ}\text{CDB} / 19^{\circ}\text{CWB}$ , and outdoor temperature of  $35^{\circ}\text{CDB} / 24^{\circ}\text{CWB}$ . Heating: Indoor temperature of  $20^{\circ}\text{CDB} / (15^{\circ}\text{CWB})$ , and outdoor temperature of  $7^{\circ}\text{CDB} / 6^{\circ}\text{CWB}$ . Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m. The protective function may work when using it outside the operation range.

**Dimensions** (Unit:mm)

# Model: AJYA40LALH / AJYA45LALH / AJYA54LALH



# V-II 2-pipe vrf

# Heat pump

Smart and cutting edge design Extensive lineup from 8HP to 48HP in 2HP increment Connectable indoor unit capacity ratio up to 150%

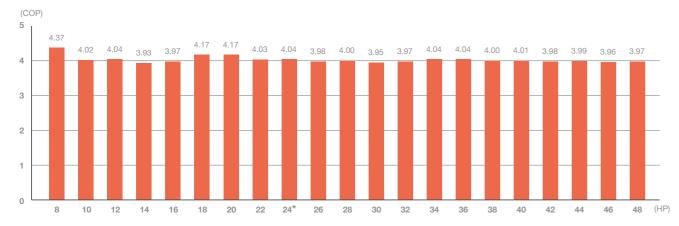


## **Features**

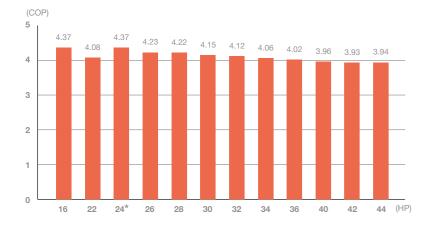
# **Efficiency in actual operation**

Top class high COP is realized for all combinations by our unique heat exchanger structure, high efficient DC twin compressor, and other our own technologies.

# Space saving combination



# **Energy efficiency combination**

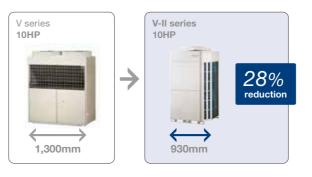




## **Features**

# Space saving and compact size

Compact size has been achieved by significantly reducing the width of the outdoor units compared to previous models.





# Energy saving technology that boosted operation efficiency



# Powerful large propeller fan-

By using CFD<sup>\*1</sup> technology, A newly designed fan achieves high performance and low noise operation.

\*1. CFD = Computational Fluid Dynamics



# DC fan motor -

Power consumption has been reduced by 25% compared to previous models by using a compact and high performance DC fan motor.



# Subcool heat exchanger -

High Heat Exchange efficiency is achieved by using an internal projection shape double pipe construction



# Sine-wave DC inverter control

High efficiency operation is realized by using a sine wave DC inverter control.



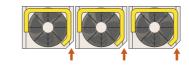
# DC twin rotary compressor -

Significantly greater efficiency is realized by use of a large capacity DC twin rotary compressor with substantially increased refrigerant intake and compression efficiency.



# 4-face heat exchanger

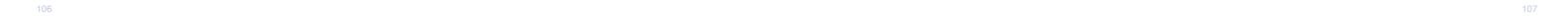
Heat exchange efficiency is significantly improved by the introduction of a new 4-face heat exchanger that increases effective surface area.



# Front intake port

(corner cut air inhaling structure)

In multiple outdoor unit installations, the unique front intake design improves airflow into the Heat Exchange

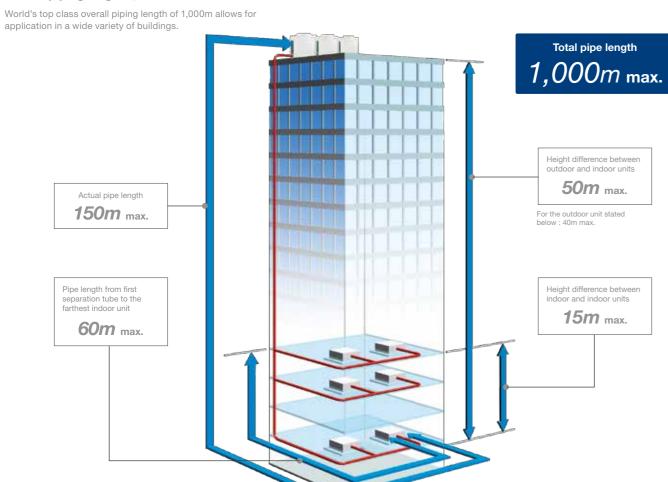


# V-II 2-pipe vrf

# **Features**

# **Design Flexibility**

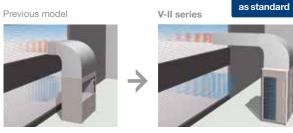
# Overall piping length 1,000m



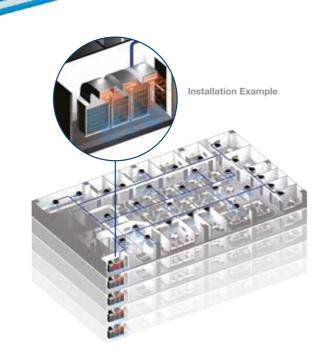
# High static pressure of 80Pa

The outdoor unit can have a condenser hood easily connected with a static pressure of 80Pa standard. This allows outdoor units to be installed within plant rooms in high rise buildings.





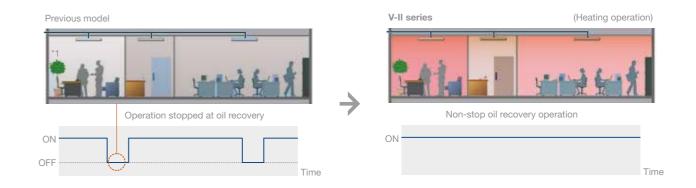
Large diameter fan and DC motor has been utilized allowing an external static pressure of 80Pa. This is approximately 2.6 times greater than the previous model.



# **More Comfort**

# Non-stop oil recovery operation

A comfortable room condition is maintained during oil recovery mode because the product continues to operate without stopping the cooling or heating operation.



# **Easy Service & Maintenance**

Maintenance of electrical components, valves, and compressor parts from the front is possible.

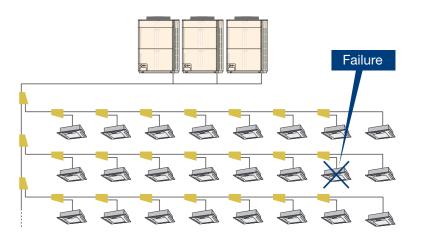
# Split front panel

Split front panel allows for maintenance from top or bottom of the outdoor unit



# Indoor unit continuous operation

Each indoor unit is controlled individually on the system network. This allows all indoor units to continue to operate unaffected even if an error should occur at any indoor unit's on the VRF network system.



# √-|| 2-pipe vrf

## **Outdoor Units Lineup**

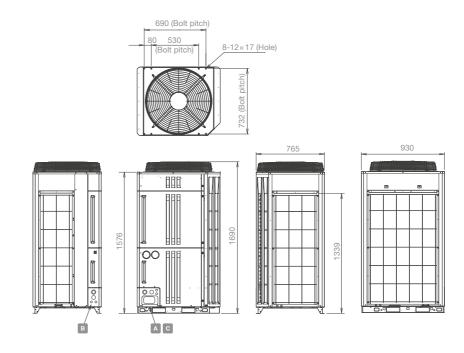
\*Combinations other than the following are not recommended.



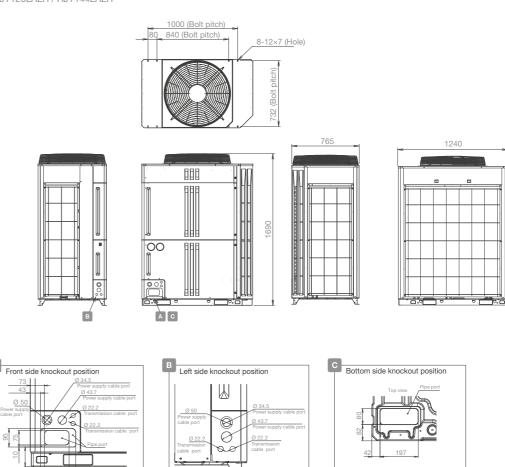


**Dimensions** (Unit::mm

8,10,12HP: AJYA72LALH / AJYA90LALH / AJY108LALH



**14,16HP:** AJY126LALH / AJY144LALH



# 

# **Outdoor units specifications**

# **Space Saving Combination**

Rating Capacity Range	HP		8	10	12	14	16	18	20	22	24
Model name			AIYA72LALH	AIYA90LALH	AlY108LALH	AIY126LALH	AIY144LALH	AIY162LALH	AIY180LALH	AIY198LALH	AIY216LALH
Unit 1 Unit 2 Unit 3			AJYA72LALH	AJYA90LALH	AJY108LALH	AJY126LALH	AJY144LALH	AJYA90LALH AJYA72LALH	AJY108LALH AJYA72LALH	AJY108LALH AJYA90LALH	AJY108LALH AJY108LALH
Maximum connectable indoor ur	nit*1		15	16	17	21	24	32	32	32	35
Indoor unit connectable capacity	Cooling	kW	11.2-33.6	14.0-42.0	16.8-50.2	20.0-60.0	22.5-67.5	25.2-75.6	28.0-83.8	30.8-92.2	33.5-100.5
Power source						3-phase	e 4 wire , 400 \	/ 50Hz			
	Cooling		22.4	28.0	33.5	40.0	45.0	50.4	55.9	61.5	67.0
Capacity	Heating	kW	25.0	31.5	37.5	45.0	50.0	56.5	62.5	69.0	75.0
	Cooling	1547	5.51	7.73	9.62	11.53	14.71	13.24	15.13	17.35	19.24
Input power	Heating	kW	5.72	7.83	9.28	11.45	12.60	31.55	15.00	1 <i>7</i> .11	18.56
EER	Cooling	W/W	4.07	3.62	3.48	3.47	3.18	3.81	3.69	3.54	3.48
COP	Heating	W/W	4.37	4.02	4.04	3.93	3.97	4.17	4.17	4.03	4.04
Air flow rate	High	m³/h	11,100	11,100	11,100	13,000	13,000	11,100 x 2	11,100 x 2	11,100 x 2	11,100 x 2
C	Cooling	IDIAN	56	58	58	60	61	60	60	61	61
Sound pressure level*2	Heating	dB(A)	58	59	60	61	61	62	62	63	63
Maximum external static pressure	Pa		80	80	80	80	80	80	80	80	80
Compresor motor output	kW		3.9	3.9	3.9 + 4.5	3.9 + 4.5	3.9 + 4.5	3.9 x 2	$3.9 \times 2 + 4.5$	3.9 x 2 + 4.5	3.9 x 2 + 4.5 x
Heat exchanger fin			Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
	Height		1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690
Dimensions	Width	mm	930	930	930	1,240	1,240	930 × 2	930 × 2	930 × 2	930 × 2
	Depth		<i>7</i> 65	765	765	765	765	765	765	765	765
Weight	kg		220	220	275	303	303	220 + 220	275 + 220	275 + 220	275 + 275
Refrigerant charge	kg		11.2	11.2	11.8	11.8	11.8	11.2 x 2	11.8 + 11.2	11.8 + 11.2	11.8 x 2
Connection pipe	Liquid		12.70	12.70	12.70	12.70	12.70	15.88	15.88	15.88	15.88
diameter	Gas	mm	22.22	22.22	28.58	28.58	28.58	28.58	28.58	34.92	34.92
O	Cooling	°C	-15 to 46	-15 to 46	-15 to 46	-15 to 46	-15 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
Operation range	Heating	C	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21
List Price		£	5427	6010	7258	8505	10273	11257	12505	13268	14516

# **Energy Efficiency Combination**

Rating Capacity Range	HP		16	22	24	26	28	30
·			99			933		
Model name			AJY144LALHH	AJY198LALHH	AJY216LALHH	AJY234LALHH	AJY252LALHH	AJY270LALHH
Unit 1 Unit 2 Unit 3			AJYA72LALH AJYA72LALH	AJY126LALH AJYA72LALH	AJYA72LALH AJYA72LALH AJYA72LALH	AJYA90LALH AJYA72LALH AJYA72LALH	AJY108LALH AJYA72LALH AJYA72LALH	AJY126LALH AJYA72LALH AJYA72LALH
Maximum connectable indoor un	it*1		30	33	36	39	42	45
Indoor unit connectable capacity	Cooling	kW	22.4-67.2	31.2-93.6	33.6-100.8	36.4-109.2	39.2-117.4	42.4-127.2
Power source					3-phase 4 wire	, 400 V, 50Hz		
o	Cooling	1347	44.8	62.4	67.2	72.8	78.3	84.8
Capacity	Heating	kW	50.0	70.0	75.0	81.5	87.5	95.0
	Cooling	1347	11.02	17.04	16.53	18.75	20.64	22.55
Input power	Heating	kW	11.44	17.17	17.16	19.27	20.72	22.89
EER	Cooling	W/W	4.07	3.66	4.07	3.88	3.79	3.76
COP	Heating	W/W	4.37	4.08	4.37	4.23	4.22	4.15
Air flow rate	High	m³/h	11,100 × 2	13,000 + 11,100	11,100 × 3	11,100 × 3	11,100 × 3	13,000 + 11,000 x 2
Sound pressure level*2	Cooling	dB(A)	59	61	61	62	62	63
Sound pressure level 2	Heating	db(A)	59	62	61	62	63	63
Maximum external static pressure	Pa		80	80	80	80	80	80
Compresor motor output	kW		3.9 x 2	3.9 x 2 + 4.5	3.9 x 3	3.9 x 3	3.9 x 3 + 4.5	3.9 x 3 + 4.5
Heat exchanger fin			Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
	Height		1,690	1,690	1,690	1,690	1,690	1,690
Dimensions	Width	mm	930 × 2	930 + 1,240	930 × 3	930 × 3	930 × 3	930 x 2 + 1,240
	Depth		765	765	765	765	765	765
Weight	kg		220 + 220	303 + 220	220 + 220 + 220	220 + 220 + 220	275 + 220 + 220	303 + 220 + 220
Refrigerant charge	kg		11.2 x 2	11.8 + 11.2	11.2 x 3	11.2 x 3	11.8 + 11.2 x 2	11.8 + 11.2 x 2
Connection pipe	Liquid	mm	12.70	15.88	15.88	15.88	15.88	19.05
diameter	Gas	mm	28.58	34.92	34.92	34.92	34.92	34.92
O	Cooling		-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
Operation range	Heating	- °C	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21
List Price		£	10494	13752	15741	16504	17752	18999

Note: Specifications are based on the following conditions.

Cooling: Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating: Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m.

When cooling operation will be conducted at outdoor air temperature below -5°C, the outdoor unit must be installed in a position that is higher than or equal to those of indoor units.

26	28	30	32	34	36	38	40	42	44	46	48
		F		8			73				
AJY234LALH	AJY252LALH	AJY270LALH	AJY288LALH	AJY306LALH	AJY324LALH	AJY342LALH	AJY360LALH	AJY378LALH	AJY396LALH	AJY414LALH	AJY432LALH
AJY126LALH AJY108LALH	AJY144LALH AJY108LALH	AJY144LALH AJY126LALH	AJY144LALH AJY144LALH	AJY108LALH AJY108LALH AJYA90LALH	AJY108LALH AJY108LALH AJY108LALH	AJY126LALH AJY108LALH AJY108LALH	AJY144LALH AJY108LALH AJY108LALH	AJY144LALH AJY126LALH AJY108LALH	AJY144LALH AJY144LALH AJY108LALH	AJY144LALH AJY144LALH AJY126LALH	AJY144LALH AJY144LALH AJY144LALH
39	42	45	48	48	48	48	48	48	48	48	48
36.8-110.2	39.3-117.7	42.5-127.5	45.0-135.0	47.5-142.5	50.3-150.7	53.5-160.5	56.0-168.0	59.3-177.7	61.8-185.2	65.0-195.0	67.5-202.5
					3-phase 4 wire	, 400 V, 50Hz					
73.5	78.5	85.0	90.0	95.0	100.5	107.0	112.0	118.5	123.5	130.0	135.0
82.5	87.5	95.0	100.0	106.5	112.5	120.0	125.0	132.5	137.5	145.0	150.0
21.15	23.79	25.70	28.34	26.97	28.86	30.77	33.41	35.32	37.96	39.87	42.51
20.73	21.88	24.05	25.20	26.39	27.84	30.01	31.16	33.33	34.48	36.65	37.80
3.48	3.30	3.31	3.18	3.52	3.48	3.48	3.35	3.36	3.25	3.26	3.18
3.98	4.00	3.95	3.97	4.04	4.04	4.00	4.01	3.98	3.99	3.96	3.97
13,000 + 11,100	13,000 + 11,100	13,000 x 2	13,000 x 2	11,100 x 3	11,100 x 3	13,000 + 11,100 x 2	13,000 + 11,100 x 2	13,000 x 2 + 11,100	13,000 x 2 + 11,100	13,000 x 3	13,000 x 3
62	63	64	64	63	63	64	64	65	65	65	66
64	64	64	64	64	65	65	65	655	65	66	66
80	80	80	80	80	80	80	80	80	80	80	80
$3.9 \times 2 + 4.5 \times 2$	$3.9 \times 2 + 4.5 \times 2$	3.9 x 2 + 4.5 x 2	3.9 x 2 + 4.5 x 2	3.9 x 3 + 4.5 x 2	$3.9 \times 3 + 4.5 \times 3$	$3.9 \times 3 + 4.5 \times 3$	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3	$3.9 \times 3 + 4.5 \times 3$	3.9 x 3 + 4.5 x
Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690
930 + 1,240	930 + 1,240	1,240 x 2	1,240 x 2	930 x 3	930 x 3	930 x 2 + 1,240	930 x 2 + 1,240	930 + 1,240 x 2	930 + 1,240 x 2	1,240 x 3	1,240 x 3
765	765	765	765	765	765	765	765	765	765	765	765
303 + 275	303 + 275	303 + 303	296 + 296	275 + 275 + 220	275 + 275 + 275	303 + 275 + 275	303 + 275 + 275	303 + 303 + 275	303 + 303 + 275	303 + 303 + 303	303 + 303 + 30
11.8 x 2	11.8 x 2	11.8 x 2	11.8 x 2	11.8 x 2 + 11.2	11.8 x 3						
15.88	15.88	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05
34.92	34.92	34.92	34.92	34.92	41.27	41.27	41.27	41.27	41.27	41.27	41.27
-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21
15763	17531	18778	20546	20526	21774	23021	24789	26036	27804	29051	30819

32	34	36	40	42	44
AJY288LALHH	AJY306LALHH	AJY324LALHH	AJY360LALHH	AJY378LALHH	AJY396LALHH
AJY108LALH AJY108LALH AJYA72LALH	AJY126IALH AJY108IALH AJYA72IALH	AJY126LALH AJY126LALH AJYA72LALH	AJY126LALH AJY126LALH AJY108LALH	AJY126LALH AJY126LALH AJY126LALH	AJY144LALH AJY126LALH AJY126LALH
48	48	48	48	48	48
44.7-134.1	48.0-143.8	51.2-153.6	56.8-170.2	60.0-180.0	62.5-187.5
		3-phase 4 wire	, 400 V, 50Hz		
89.4	95.9	102.4	113.5	120.0	125.0
100.0	107.5	115.0	127.5	135.0	140.0
24.75	26.66	28.57	32.68	34.59	37.23
24.28	26.45	28.62	32.18	34.35	35.50
3.61	3.60	3.58	3.47	3.47	3.36
4.12	4.06	4.02	3.96	3.93	3.94
11,100 x 3	13,000 + 11,100 x 2	13,000 x 2 + 11,100	13,000 x 2 + 11,100	13,000 x 3	13,000 x 3
62	63	64	64	65	65
64	64	65	65	66	66
80	80	80	80	80	80
$3.9 \times 3 + 4.5 \times 2$	3.9 x 3 + 4.5 x 2	3.9 x 3 + 4.5 x 2	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3
Blue fin					
1,690	1,690	1,690	1,690	1,690	1,690
930 × 3	930 x 2 + 1,240	930 + 1,240 x 2	930 + 1,240 x 2	1,240 x 3	1,240 x 3
765	765	765	765	765	765
275 + 275 + 220	303 + 275 + 220	303 + 303 + 220	303 + 303 + 275	303 + 303 + 303	303 + 303 + 303
$11.8 \times 2 + 11.2$	11.8 x 2 + 11.2	11.8 x 2 + 11.2	11.8 x 3	11.8 x 3	11.8 x 3
19.05	19.05	19.05	19.05	19.05	19.05
34.92	34.92	41.27	41.27	41.27	41.27
-5 to 46					
-20 to 21					
19763	21010	22257	24268	25515	27283

<sup>\*1</sup> Minimum connectable indoor unit number is 2.

However ARXC72 and ARXC90 can be used

<sup>\*2</sup> The noise value is the value when measured in an anechoic room.

When measured in the actual installed state, surrounding noise and reflections are received and the measured value is usually larger than the indicated value.

# VR-II 3-pipe vrf

# **Heat Recovery**

Smart and cutting edge design
Extensive lineup from 8HP to 48HP in 2HP increment
Connectable indoor unit capacity ratio up to 150%



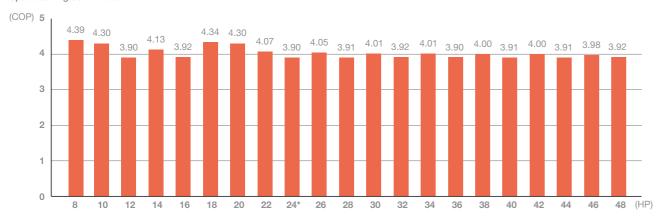
# **Features**

# **High Efficiency**

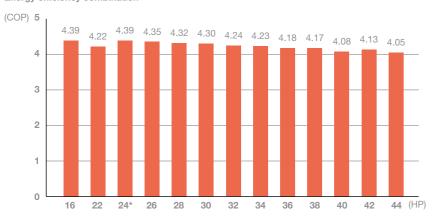
# **Efficiency in actual operation**

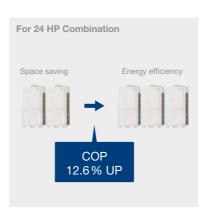
Top class high COP is realized for all combinations by our unique heat exchanger structure, high efficient DC twin compressor, and other our own technologies.

# Space saving combination



# Energy efficiency combination





# **Features**

# **Energy saving technology that boosted operation efficiency**



# Powerful large propeller fan

By using CFD<sup>\*1</sup> technology, a newly designed fan achieves high performance and low noise operation.

\*1. CFD = Computational Fluid Dynamics



# 3 phase DC fan motor

Efficiency is substantially improved by high efficient motor with sophisticated driver control. In addition, low noise is realized by DC fan motor.



# Subcool heat exchanger

High Heat Exchange efficiency is achieved by using an internal projection shape double pipe construction.



## Sine-wave DC inverter control

High efficiency is realized by adoption of reduced switching loss IPM.



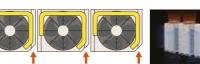
# High efficient compressor Large capacity DC inverter compressor

Large capacity high efficient DC twin rotary compressor with excellent intermediate capability.



# 4-face heat exchanger -

Heat exchange efficiency is significantly improved by the introduction of a new 4-face heat exchanger that increases effective surface area.



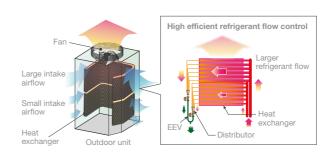
# Front intake port

(corner cut air inhaling structure)

In multiple outdoor unit installations, the unique front intake design improves airflow into the Heat Exchanger.

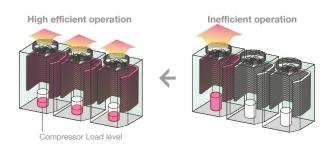


Heat exchanger is split into top and bottom. Heat exchange efficiency is improved by optimum heat exchanger path refrigerant control. Refrigerant is more distributed at the top side heat exchanger with a large intake airflow.



# Sophisticated operation control

When multiple outdoor units are connected, sophisticated operation is performed by each compressor. Efficiency is improved by all compressors at part load and distributing refrigerant to all of the heat exchangers rather than to one compressor.

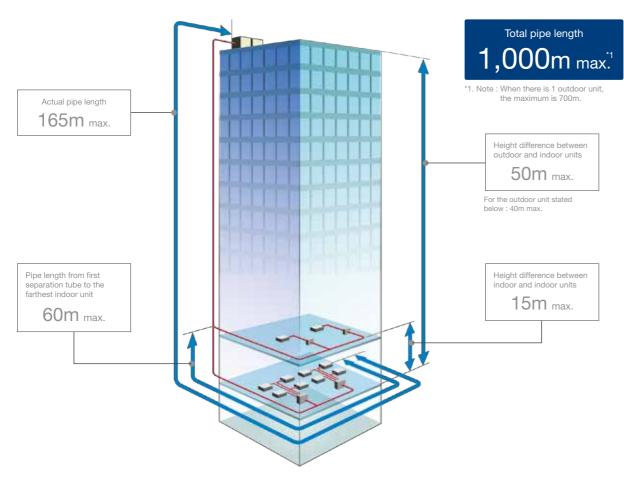


# NR-II 3-pipe vrf

# **Features**

# **Design Flexibility**

# Overall piping length 1,000m

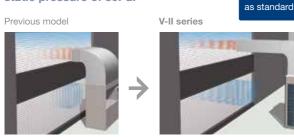


# High static pressure of 80Pa

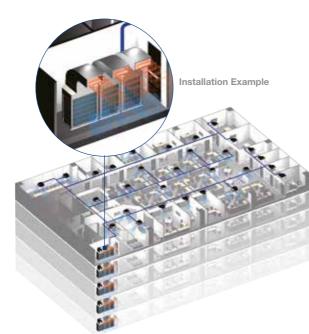
Large diameter fan and 3 phase DC motor has been utilized allowing an external static pressure of 80Pa. This allows outdoor units to be installed on balconies, etc. on each floor in high rise buildings.

80 Pa



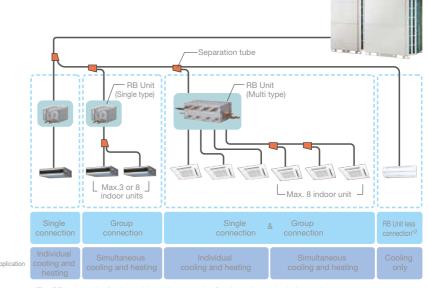


Large diameter fan and DC motor has been utilized allowing an external static pressure of 80Pa. This is approximately 2.6 times greater than the previous model.



# Flexible piping connection

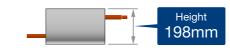
A more flexible refrigerant piping work is possible by the use of various piping and RB Unit connections, for adjustments to the floor layout and building structure.



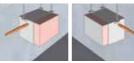
- The RB unit can be freely positioned between the first branch and the indoor unit.
- The maximum height difference between RB units is 15 m.
- \*2. RB Unit is not necessary for cooling only use.

# **Easy Installation & Maintenance**

# Flexible installation of RB unit



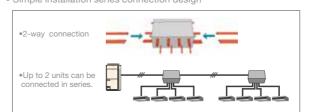
- Small & slim design saves space
- A drain pipe is not required
- The control box position can be changed to meet the installation conditions







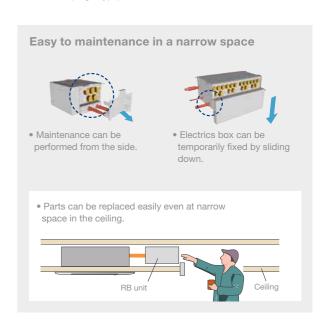
- Small design saves space
- A drain pipe is not required
- Simple installation series connection design







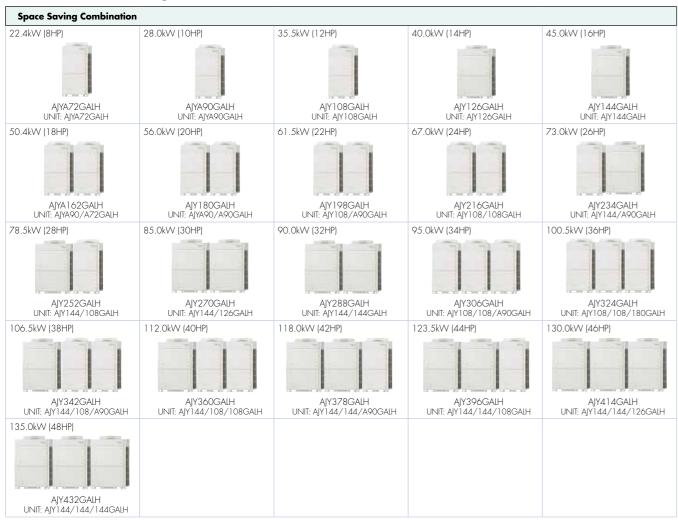
RB unit (single type)



# VR-II 3-pipe vrf

## **Outdoor Units Lineup**

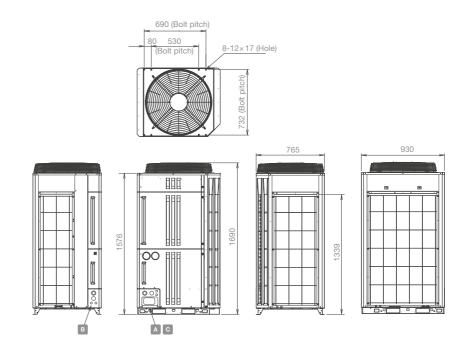
\*Combinations other than the following are not recommended.



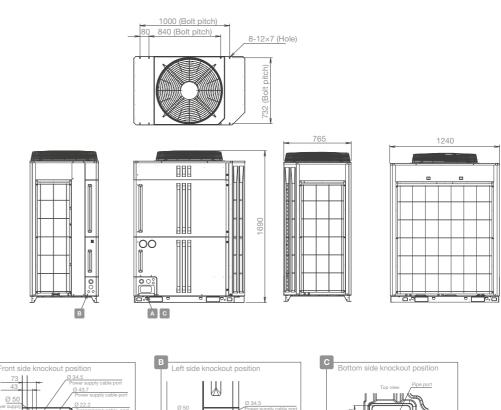


Dimensions (Unit:mm)

8,10,12HP: AJYA72GALH / AJYA90GALH / AJY108GALH



**14,16HP:** AJY126GALH / AJY144GALH



# VR-II 3-pipe vrf

# **Outdoor units specifications**

# **Space Saving Combination**

Rating Capacity Range	HP		8	10	12	14	16	18	20	22	24
Set model name			AJYA72GALH	AJYA90GALH	AJY108GALH	AJY126GALH	AJY144GALH	AJY162GALH	AJY180GALH	AJY198GALH	AJY216GALH
Unit 1 Unit 2 Unit 3			AJYA72GALH	AJYA90GALH	AJY108GALH	AJY126GALH	AJY144GALH	AJYA90GALH AJYA72GALH	AJYA90GALH AJYA90GALH	AJY108GALH AJYA90GALH	AJY108GALH AJY108GALH
Maximum connectable indoor u	ınit*1		1.5	16	17	21	24	27	30	32	35
Indoor unit connectable capaci	hy	kW	11.2-33.6	14.0-42.0	16.8-50.2	20.0-60.0	22.5-67.5	25.2-75.6	28.0-84.0	30.8-92.2	33.5-100.5
Power source						3-phas	e 4 wire , 400 V	/, 50Hz			
	Cooling	1111	22.4	28.0	33.5	40.0	45.0	50.4	56.0	61.5	67.0
Capacity	Heating	kW	25.0	31.5	37.5	45.0	50.0	56.5	63.0	69.0	75.0
1	Cooling	kW	5.45	7.11	9.75	11.34	13.61	12.56	14.22	16.86	19.50
Input power	Heating	kVV	5.70	7.33	9.62	10.90	12.77	13.03	14.66	16.95	19.24
EER	3 1		4.11	3.94	3.44	3.53	3.31	4.01	3.94	3.65	3.44
9 .		W/W	4.39	4.30	3.90	4.13	3.92	4.34	4.30	4.07	3.90
Air flow rate		m³/h	11,100	11,100	11,100	13,000	13,000	11,100 × 2	11,100 × 2	11,100 × 2	11,100 × 2
C	Cooling	ID(A)	56	58	59	60	61	60	61	62	62
Sound pressure level*2	Heating	dB(A)	58	59	61	61	61	62	62	63	64
Maximum external static pressu	re	Pa	80	80	80	80	80	80	80	80	80
Compresor motor output		kW	7.5	7.5	7.5	11.0	11.0	7.5 × 2	7.5 × 2	7.5 × 2	7.5 × 2
Heat exchanger fin			Blue fin	Blue fin	Blue fin	Blue fin	Blue fin				
	Height		1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690
Dimensions	Width	mm	930	930	930	1,240	1,240	930 × 2	930 × 2	930 × 2	930 × 2
	Depth		765	765	765	765	765	765	765	765	765
Weight		kg	262	262	262	286	286	262 × 2	262 × 2	262 × 2	262 × 2
Refrigerant charge		kg	11.8	11.8	11.8	11.8	11.8	11.8 × 2	11.8 × 2	11.8 × 2	11.8 × 2
_	Liquid		12.70	12.70	12.70	12.70	12.70	15.88	15.88	15.88	15.88
	Connection pipe Discharge gas mr		15.88	19.05	19.05	22.22	22.22	22.22	22.22	28.58	28.58
diameter Suction gas			22.22	22.22	28.58	28.58	28.58	28.58	28.58	34.92	34.92
	Cooling		-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46				
Operation range	Heating	°CDB	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21				
	Cooling/Heating		-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21				
List Price		£	5672	6203	7585	8864	10229	11875	12406	13788	15170

# **Energy Efficiency Combination**

Rating Capacity Range	HP		16	22	24	26	28	30
Set model name			AJY144GALHH	AJY198GALHH	AJY216GALHH	AJY234GALHH	AJY252GALHH	AJY270GALHH
Unit 1 Unit 2 Unit 3			AJYA72GALH AJYA72GALH	AJY126GALH AJYA72GALH	AJYA72GALH AJYA72GALH AJYA72GALH	AJYA90GALH AJYA72GALH AJYA72GALH	AJYA90GALH AJYA90GALH AJYA72GALH	AJYA90GALH AJYA90GALH AJYA90GALH
Maximum connectable indoor u	nit*1		24	33	36	39	42	45
Indoor unit connectable capacity	y	kW	22.4-67.2	31.2-93.6	33.6-100.8	36.4-109.2	39.2-117.6	42.0-126.0
Power source					3-phase 4 wire	, 400 V, 50Hz		
	Cooling	1111	44.8	62.4	67.2	72.8	78.4	84.0
Capacity	Heating	kVV	50.0	70.0	75.0	81.5	88.0	94.5
	Cooling	kW	10.90	16.79	16.35	18.01	19.67	21.33
Input power	Heating	kVV	11.40	16.60	17.10	18.73	20.36	21.99
EER	Cooling	W/W	4.11	3.72	4.11	4.04	3.99	3.94
COP	Heating	W/W	4.39	4.22	4.39	4.35	4.32	4.30
Air flow rate		m³/h	11,100 × 2	13,000 + 11,100	11,100 × 3	11,100 × 3	11,100 × 3	11,100 × 3
C	Cooling	IDIAL	59	61	61	62	62	63
Sound pressure level*2	Heating	dB(A)	61	63	63	63	63	64
Maximum external static pressure	e	Pa	80	80	80	80	80	80
Compresor motor output		kW	7.5 × 2	11.0 + 7.5	7.5 × 3	7.5 × 3	7.5 × 3	7.5 × 3
Heat exchanger fin			Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
	Height		1,690	1,690	1,690	1,690	1,690	1,690
Dimensions	Width	mm	930 × 2	1,240 + 930	930 × 3	930 × 3	930 × 3	930 × 3
	Depth		765	765	765	765	765	765
Weight		kg	262 × 2	286+262	262 × 3	262 × 3	262 × 3	262 × 3
Refrigerant charge		kg	11.8 × 2	11.8 × 2	11.8 × 3	11.8×3	11.8 × 3	11.8 × 3
	Liquid		12.70	15.88	15.88	15.88	15.88	15.88
Connection pipe Discharge as		mm	22.22	28.58	28.58	28.58	28.58	28.58
diameter	Suction gas		28.58	34.92	34.92	34.92	34.92	34.92
Cooling			-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46
Operation range	Heating	°CDB	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21
	Cooling/Heating		-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21
List Price		£	11344	14536	17016	17547	18078	18609

Note: Specifications are based on the following conditions.

Cooling: Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating: Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m.

26	28	30	32	34	36	38	40	42	44	46	48
AJY234GALH	AJY252GALH	AJY270GALH	AJY288GALH	AJY306GALH	AJY324GALH	AJY342GALH	AJY360GALH	AJY378GALH	AJY396GALH	AJY414GALH	AJY432GALH
AJY144GALH AJYA90GALH	AJY144GALH AJY108GALH	AJY144GALH AJY126GALH	AJY144GALH AJY144GALH	AJY108GALH AJY108GALH AJYA90GALH	AJY108GALH AJY108GALH AJY108GALH	AJY144GALH AJY108GALH AJYA90GALH	AJY144GALH AJY108GALH AJY108GALH	AJY144GALH AJY144GALH AJYA90GALH	AJY144GALH AJY144GALH AJY108GALH	AJY144GALH AJY144GALH AJY126GALH	AJY144GALH AJY144GALH AJY144GALH
39	42	45	48	50	53	57	60	63	64	64	64
36.5-109.5	39.3-117.7	42.5-127.5	45.0-135.0	47.5-142.5	50.3-150.7	53.3-159.7	56.0-168.0	59.0-177.0	61.8-185.2	65.0-195.0	67.5-202.5
					3-phase 4 wire	, 400 V, 50Hz					
73.0	78.5	85.0	90.0	95.0	100.5	106.5	112.0	118.0	123.5	130.0	135.0
81.5	87.5	95.0	100.0	106.5	112.5	119.0	125.0	131.5	137.5	145.0	150.0
20.72	23.36	24.95	27.22	26.61	29.25	30.47	33.11	34.33	36.97	38.56	40.83
20.10	22.39	23.67	25.54	26.57	28.86	29.72	32.01	32.87	35.16	36.44	38.31
3.52	3.36	3.41	3.31	3.57	3.44	3.50	3.38	3.44	3.34	3.37	3.31
4.05	3.91	4.01	3.92	4.01	3.90	4.00	3.91	4.00	3.91	3.98	3.92
3,000 + 11,100	13,000 + 11,100	13,000 × 2	13,000 × 2	11,100 × 3	11,100 × 3	13,000 + 11,100 × 2	13,000 + 11,100 × 2	13,000 x 2 + 11,100	13,000 x 2 + 11,100	13,000 × 3	13,000 × 3
63	63	64	64	63	64	64	65	65	65	65	66
63	64	64	64	65	66	65	66	65	66	66	66
80	80	80	80	80	80	80	80	80	80	80	80
11.0 + 7.5	11.0 + 7.5	$11.0 \times 2$	11.0 × 2	7.5 × 3	7.5 × 3	$11.0 + 7.5 \times 2$	11.0 × 3	11.0 × 3			
Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin				
1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690
1,240 + 930	1,240 + 930	$1,240 \times 2$	1,240 × 2	930 × 3	930 × 3	1,240 + 930 × 2	1,240 + 930 × 2	1,240 × 2 + 930	1,240 × 2 + 930	1,240 × 3	1,240 × 3
765	765	765	765	765	765	765	765	765	765	765	765
286 + 262	286 + 262	286 × 2	286 × 2	286 × 2	286 × 3	286 × 3	286 + 262 × 2	286 + 262 × 2	286 + 262 × 2	286 × 3	286 × 3
11.8 × 2	11.8 × 2	11.8 × 2	11.8 × 2	11.8 × 2	11.8 × 3	11.8 × 3	11.8×3	11.8 × 3	11.8 × 3	11.8 × 3	11.8 × 3
15.88	15.88	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05
28.58	28.58	28.58	28.58	28.58	28.58	34.92	34.92	34.92	34.92	34.92	34.92
34.92	34.92	34.92	34.92	34.92	41.27	41.27	41.27	41.27	41.27	41.27	41.27
-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46				
-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21				
-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21				
16432	17814	19093	20458	21373	22755	24017	25399	26661	28043	29322	30687

26	34	36	38	40	42	44
AJY288GALHH	AJY306GALHH	AJY324GALHH	AJY342GALHH	AJY360GALHH	AJY378GALHH	AJY396GALHH
AJY126GALH AJYA90GALH AJYA72GALH	AJY126GALH AJYA90GALH AJYA90GALH	AJY126GALH AJY126GALH AJYA72GALH	AJY126GALH AJY126GALH AJYA90GALH	AJY144GALH AJY126GALH AJYA90GALH	AJY126GALH AJY126GALH AJY126GALH	AJY144GALH AJY126GALH AJY126GALH
48	51	54	57	60	64	64
45.2-135.6	48.0-144.0	51.2-153.6	54.0-162.0	56.5-169.5	60.0-180.0	62.5-187.5
		3-	phase 4 wire , 400 V, 50	Hz		
90.4	96.0	102.4	108.0	113.0	120.0	125.0
101.5	108.0	115.0	121.5	126.5	135.0	140.0
23.90	25.56	28.13	29.79	32.06	34.02	36.29
23.93	25.56	27.50	29.13	31.00	32.70	34.57
3.78	3.76	3.64	3.63	3.52	3.53	3.44
4.24	4.23	4.18	4.17	4.08	4.13	4.05
13,000 + 11,100 × 2	13,000 + 11,100 × 2	13,000 × 2 + 11,100	13,000 × 2 + 11,100	13,000 x 2 + 11,100	13,000 ×3	13,000 × 3
63	64	64	64	65	65	65
64	65	65	65	65	66	66
80	80	80	80	80	80	80
11.0 + 7.5 × 2	11.0 + 7.5 × 2	11.0 × 2 + 7.5	11.0 × 2 + 7.5	11.0 × 2 + 7.5	11.0 × 3	11.0 × 3
Blue fin						
1,690	1,690	1,690	1,690	1,690	1,690	1,690
1,240 + 930 × 2	1,240 + 930 × 2	1,240 × 2 + 930	1,240 × 2 + 930	1,240 × 2 + 930	1,240 × 3	1,240 × 3
765	765	765	765	765	765	765
$286 + 262 \times 2$	286 + 262 × 2	286 × 2 + 262	286 × 2 + 262	286 × 2 + 262	286 × 3	286 × 3
11.8 × 3	11.8 × 3	11.8 × 3	11.8 × 3	11.8 × 3	11.8 × 3	11.8 × 3
19.05	19.05	19.05	19.05	19.05	19.05	19.05
28.58	28.58	28.58	34.92	34.92	34.92	34.92
34.92	34.92	41.27	41.27	41.27	41.27	41.27
-10 to 46						
-20 to 21						
-10 to 21						
20739	21270	23400	23931	25296	26592	27957

<sup>\*1</sup> Minimum connectable indoor unit number is 2.

<sup>\*2</sup> The noise value is the value when measured in an anechoic room.

When measured in the actual installed state, surrounding noise and reflections are received and the measured value is usually larger than the indicated value.

# vrf indoor units

# Indoor Unit Lineup

12 Types, 55 Models, Capacity range from 1.1kW to 25.0kW

ap	pacity range (kW)	1.1	2.2	2.8	3.6	4.5	5.6
0	del Code	4	7	9	12	14	18
	Compact Cassette	AUXB04GALH	AUXB07GALH	AUXB09GALH	AUXB12GALH	AUXB14GALH	ALIXB18GALH
	Cassette						AUXD18GAIH
	Low Static Pressure Duct		ARXB07GALH	ARXBO9GALH	ARXB12GALH	ARXB14GALH	ARXB18GALH
	Slim Duct (Drain pump internal)	ARXD04GALH	ARXD07GALH	ARXD09GAIH	ARXD12GALH	ARXD14GALH	ARXD18GALH
	Medium Static Pressure Duct						
	High Static Pressure Duct						
	Floor (*Same as Ceiling models)				ABYA12GATH	ABYA14GATH	ABYA18GATH
	Concealed Floor (*Same as Low Static Pressure Duct Models)		ARXBO7GALH	ARXB09GALH	ARXB12GALH	ARXB14GALH	ARXB18GALH
	Slim Concealed Floor (*Same as Slim Duct Models)	ARXD04GALH	ARXDO7GAIH	ARXDO9GALH	ARXD12GALH	ARXD14GALH	ARXD18GALH
	Ceiling				ABYA12GATH	ABYA14GATH	ABYA18GATH
	Wall Mounted	ASYA04GACH	ASYA07GACH	ASYA09GACH	ASYA12GACH	ASYA14GACH	ASYA18GACH
	Wall Mounted (EEV External)						
	With this model, connection of EV kit is necessary.	ASYE04GACH	ASYE07GACH	ASYE09GACH	ASYE12GACH	ASYE14GACH	

7.1	9.0	11.2	12.5	14.0	18.0	22.4	25.0
24	30	36	45	54	60	72	90
AUXB24GALH							
AUXD24GALH	AUXA30GALH	AUXA36GAIH	AUXA45GAIH	AUXA54GAIH			
ARXD24GAIH							
ARXA24GBLH	ARXA30GBLH	ARXA36GBIH	ARXA45GBIH				
		ARXC36GATH	ARXC45GATH		ARXC60GATH*	ARXC72GATH*	ARXC90GATH*
ABYA24GATH							
ARXD24GALH							
ABYA24GATH	ABYA30GATH	ABYA36GATH	ABYA45GATH	ABYA54GATH			
ASYA24GACH	ASYA30GACH						

\* ARXC60/72/90LATH cannot be connected to J-IIS and J-II series.



Model Name			Compact Cassette									
/viouei i vume			AUXB04GALH	AUXB07GALH	AUXB09GALH	AUXB12GALH	AUXB14GALH	AUXB18GALH	AUXB24GALH			
Power Source			230v ~ 50Hz									
	UK Total Cooling		0.80	1.60	2.10	2.70	3.30	4.20	5.30			
	UK Sensible Cooling		0.70	1.50	1.70	2.30	2.70	3.20	4.40			
Capacity	UK Heating	KW	1.20	2.60	3.00	3.80	4.70	5.90	7.40			
	Nominal Cooling		1.10	2.20	2.80	3.60	4.50	5.60	7.10			
	Nominal Heating		1.30	2.80	3.20	4.10	5.00	6.30	8.00			
Input Power		Watts	23	25	25	29	35	36	84			
	High		530	540	550	600	680	710	1,030			
Airflow Rate	Med	m3/hr	420/450 htg/clg * 1	450	450	530	590	580	830			
	Low		300/350 htg/clg*1	350	350	390	390	400	450			
	High		34	34	35	37	38	41	50			
Sound Pressure level	Med	dB(A)	28/30 htg/clg * 1	30	30	34	34	35	44			
	Low		21/25 htg/clg *1	25	25	27	27	27	30			
Dimensions (H x W x D	)	mm			245 x 570	) x 570 (grille 50 x 700	x 700]					
Weight		kg			15			1	7			
Commention with a dis-	Liquid (flare)	to the extreme			1/4 (6.35)			3/8	(9.52)			
Connection pipe dia	Gas (flare)	inches (mm)	1/2 (12.7)				5/8 (15.88)					
List Price		£	tbc	857	872	894	944	980	1070			



Model Name					Cas	sette				
/viodei i vame			AUXD18GALH	AUXD24GALH	AUXA30GALH	AUXA36GALH	AUXA45GALH	AUXA54GALH		
Power Source			230v ~50Hz							
	UK Total Cooling		4.20	5.30	6.70	8.30	9.30	10.40		
	UK Sensible Cooling		3.90	4.80	6.00	7.10	7.70	8.40		
Capacity	UK Heating	KW	5.90	7.40	9.30	11.60	13.00	14.90		
	Nominal Cooling		5.60	7.10	9.00	11.20	12.50	14.00		
	Nominal Heating		6.30	8.00	10.00	12.50	14.00	16.00		
Input Power		Watts	39	46	59	80	99	119		
	High		1,150	1,280	1,600	1,800	1,900	2,000		
Airflow Rate	Med	m3/hr	940	1,040	1,300	1,300	1,370	1,370		
	Low		870	870	1,100	1,100	1,100	1,100		
	High		36	38	40	44	46	47		
Sound Pressure level	Med	dB(A)	30	33	38	38	39	39		
	Low		29	29	33	33	33	33		
Dimensions (H x W x D	)	mm	246 x 8	40 x 840		288 x 840 x 840 (g	rille 50 x 950 x 950)			
Weight		kg	2	2		2	7			
Canadian sine dia	Liquid (flare)	inches (mm)			3/8	(9.52)				
Connection pipe dia	Gas (flare)	inches (mm)	5/8 (15.88)		3/4[		3/4 (19.05)			
List Price		£	1028	1096	1157	1307	1382	1452		

# indoor units specifications





Model Name				Low St	atic Pressure Duct / Conceal	ed Floor			
/viodei i Name			ARXB07GALH	ARXB09GALH	ARXB12GALH	ARXB14GALH	ARXB18GALH		
Power Source			230v ~ 50Hz						
	UK Total Cooling		1.60	2.10	2.70	3.30	4.20		
	UK Sensible Cooling		1.30	1.70	2.20	2.90	3.40		
Capacity	UK Heating	KW	2.60	3.00	3.70	4.70	5.90		
	Nominal Cooling		2.20	2.80	3.60	4.50	5.60		
	Nominal Heating		2.80	3.20	4.00	5.00	6.30		
Input Power		Watts	46	55	63	90	96		
	High		370	440	590	800	890		
Airflow Rate	Med	m3/hr	310	370	500	<i>7</i> 50	810		
	Low		280	340	450	700	730		
Static Pressure			0 to 50	0 to 50	0 to 50	0 to 50	0 to 50		
Standard static pressure	9	Pa —	25	25	25	25	25		
	High		29	31	30	33	36		
Sound Pressure level	Med	dB(A)	26	29	28	32	34		
	Low		24	27	25	30	30		
Dimensions (H x W x E	)	mm	217 x 6	63 x 595		217 x 953 x 595			
Weight		kg	1	5	2	2	23		
Caracation at a dis-	Liquid (flare)	in the extremal		1/4	(6.35)		3/8 (9.52)		
Connection pipe dia	Gas (flare)	inches (mm)		1/2	(12.7)		5/8 (15.88)		
List Price		£	604	620	704	743	788		







M. LINI					Slin	Duct / Slim Con	cealed Floor			
Model Name			ARXD04GALH	ARXD07GALH	ARXD09GALH	ARXD12GALH	ARXD14GALH	ARXD18GALH	ARXD24GALH	
Power Source			230v ~50Hz							
	UK Total Cooling		0.80	1.60	2.10	2.70	3.30	4.20	5.30	
	UK Sensible Cooling		0.70	1.50	1.80	2.30	2.90	3.50	4.90	
Capacity	UK Heating	KW	1.20	2.60	3.00	3.70	4.70	5.90	7.40	
	Nominal Cooling		1.10	2.20	2.80	3.60	4.50	5.60	7.10	
	Nominal Heating		1.30	2.80	3.20	4.00	5.00	6.30	8.00	
Input Power	-	Watts	38	44	50	54	92	83	122	
	High		510	550	600	600	800	940	1,330	
Airflow Rate	Med	m3/hr	400/470 htg/clg * 1	490	550	510	710	840	1,240	
	Low		320/440 htg/clg * 1	440	480	450	610	750	1,100	
Static Pressure			0 to 90	0 to 90	0 to 90	0 to 90	0 to 90	0 to 90	0 to 50	
Standard static pressure	9	Pa Pa	25	25	25	25	25	25	25	
	High		26	28	29	30	34	34	35	
Sound Pressure level	Med	dB(A)	21/25 htg/clg	25	26	27	32	32	32	
	Low		20/22 htg/clg	22	24	24	28	28	29	
Dimensions (H x W x [		mm		11	98 x 700 x 620			198 x 900 x 620	198 x 1,100 x 620	
Weight		kg		17		1	8	22	26	
	Liquid (flare)				1/4 (6.35)			3/8	(9.52)	
Connection pipe dia	Gas (flare)	inches (mm)	1/2 (12.7)				5/8 (	15.88)		
List Price		£	tbc	635	651	740	780	828	866	

<sup>\* 1:</sup> This value is under cooling operation.



M. LINI				Medium Stati	c Pressure Duct				
Model Name			ARXA24GBLH	ARXA30GBLH	ARXA36GBLH	ARXA45GBLH			
Power Source			230v ~ 50Hz						
	UK Total Cooling		5.30	6.70	8.30	9.30			
	UK Sensible Cooling		4.70	5.60	7.00	7.90			
Capacity	UK Heating	KW	7.40	9.30	11.60	13.00			
	Nominal Cooling		7.10	9.00	11.20	12.50			
	Nominal Heating		8.00	10.00	12.50	14.00			
Input Power		Watts	94	108	194	240			
	High		1,280	1,410	1,840	1,970			
Airflow Rate	Med	m3/hr	990	1,280	1,600	1,860			
	Low		840	1,150	1,470	1,640			
Static Pressure		D	0 to 150	0 to 150	0 to 150	0 to 150			
Standard static pressur	e	Pa Pa	40	50	50	60			
	High		31	34	37	41			
Sound Pressure level	Med	dB(A)	27	32	35	38			
	Low		23	29	33	36			
Dimen	sions (H x W x D)	mm		270 x 1,	135 x 700				
	Weight	kg	36		40				
Caracation aire dia	Liquid (flare)	5k/1		1/4	(6.35)				
Connection pipe dia	Gas (flare)	inches (mm)	5/8	(15.88)	3/4(1	19.05)			
List Price		£	825	942	1061	1179			

Specifications are based on the following conditions for all VRF indoor units:

Nominal Cooling: Indoor temperature of 27°CDB / 19°CWB and outdoor temperature of 35°CDB / 24°CWB

Nominal Heating: Indoor temperature of 20°CDB and outdoor temperature of 7°CDB

UK Cooling: Indoor temperature 23°CD / 16°CWB and outdoor temperature 30°C

UK Heating: Indoor temperature 20°CDB and outdoor temperature 0°C

# indoor units specifications



Model Name					High Static Pressure Duct		
/viodei i vame			ARXC36GATH	ARXC45GATH	ARXC60GATH*	ARXC72GATH*	ARXC90GATH*
Power Source				230	v ~ 50Hz		
	UK Total Cooling		8.30	9.30	13.40	16.60	18.60
	UK Sensible Cooling		7.40	9.20	12.20	15.10	15.60
Capacity	UK Heating	KW	11.60	13.00	18.60	23.30	26.00
	Nominal Cooling		11.20	12.50	18.00	22.40	25.00
	Nominal Heating		12.50	14.00	20.00	25.00	28.00
Input Power		Watts	405	715	730	1100	1250
	High		2,600	3,500	3,500	3,900	4,300
Airflow Rate	Med	m3/hr	1,950	3,000	3,000	3,300	4,000
	Low		1,450	2,460	2,460	3,000	3,500
Static Pressure			100 to 200	100 to 250	100 to 250	50 to 300	100 to 300
Standard static pressure	e	Pa —	100	100	100	260	250
	High		45	49	49	51	53
Sound Pressure level	Med	dB(A)	38	45	45	48	51
	Low		32	42	42	45	49
Dimensions (H x W x [	0)	mm		400 x 1,050 x 500		450 x 1,	550 x 700
Weight		kg	43		46	83	85
C	Liquid			3/8 (6.35) Flare		1/2 (12.7) Brazed	
Connection pipe dia Gas inches (mm)		inches (mm)	3/4 (19.05) Flare			7/8 (22.22) Brazed	
List Price		£	1273	1414	1556	1711	1882



Model Name				Floor /	Ceiling			
Model Name			ABYA12GATH	ABYA 1 4GATH	ABYA18GATH	ABYA24GATH		
Power Source			230v ~ 50Hz					
	UK Total Cooling		2.70	3.30	4.20	5.30		
	UK Sensible Cooling		2.40	3.00	3.80	4.20		
Capacity	UK Heating	KW	3.70	4.70	5.90	7.40		
	Nominal Cooling		3.60	4.50	5.60	7.10		
	Nominal Heating		4.00	5.00	6.30	8.00		
Input Power		Watts	30	42	74	99		
	High		660	780	1,000	1,000		
Airflow Rate	Med	m3/hr	570	640	720	820		
	Low		490	550	580	680		
	High		36	40	46	47		
Sound Pressure level	Med	dB(A)	32	36	39	42		
	Low		28	34	35	37		
Dimensions (H x W x E	)	mm		199 x 9	90 x 655			
Weight		kg	25	26	26	27		
Constitution of the	Liquid (flare)		1/4	4 (6.35)	3/8 (9	2.52)		
Connection pipe dia	Gas (flare)	inches (mm)	1/2 (12.7)		5/8(1:	5.88)		
List Price		£	829	869	922	962		



				c	eiling				
Model Name			ABYA30GATH	ABYA36GATH	ABYA45GATH	ABYA54GATH			
Power Source			230v ~ 50Hz						
	UK Total Cooling		6.70	8.30	9.30	10.40			
	UK Sensible Cooling		6.10	6.90	7.90	8.90			
Capacity	UK Heating	KW	9.30	11.60	13.00	14.90			
	Nominal Cooling		9.00	11.20	12.50	14.00			
	Nominal Heating		10.00	12.50	14.00	16.00			
Input Power		Watts	66	85	131	180			
	High		1,630	1,690	2,010	2,270			
Airflow Rate	Med	m3/hr	1,370	1,400	1,600	1,780			
	Low		1,140	1,170	1,230	1,280			
	High		42	45	48	51			
Sound Pressure level	Med	dB(A)	38	38	42	45			
	Low		33	34	35	36			
Dimensions (H x W x D	))	mm		240 x	1,660 x 700				
Weight		kg	46		48				
Consideration along the	Liquid (flare)	inches (mm)	3/8 (9.52)		3/8 (9.52)				
Connection pipe dia	Gas (flare)	inches (mm)	5/8 (15.88)		7/8 (19.05)				
List Price		£	1075	1187	1798	2406			



Model Name					Wall Mounted				
Model Name			ASYA04GACH	ASYA07GACH	ASYA09GACH	ASYA12GACH	ASYA14GACH		
Power Source			230v ~50Hz						
	UK Total Cooling		0.80	1.60	2.10	2.70	3.30		
	UK Sensible Cooling		0.70	1.60	1.90	2.30	2.80		
Capacity	UK Heating	KW	1.20	2.60	3.00	3.80	4.70		
	Nominal Cooling		1.10	2.20	2.80	3.60	4.50		
	Nominal Heating		1.30	2.80	3.20	4.10	5.00		
Input Power		Watts	13	17	18	22	34		
	High		450	490	500	560	670		
Airflow Rate	Med	m3/hr	370/440 htg/clg * 1	450	450	480	490		
	Low		320/420 htg/clg * 1	370/420 htg/clg * 1	370/420 htg/clg * 1	420	420		
	High		33	35	36	39	44		
Sound Pressure level	Med	dB(A)	27/32 htg/clg * 1	33	33	35	37		
	Low		22/31 htg/clg *1	27/31 htg/clg *1	27/31 htg/clg *1	31	32		
Dimensions (H x W x D)		mm			275 x 790 x 215				
Weight		kg			9				
6	Liquid (flare)				1/4 (6.35)				
Connection pipe dia	Gas (flare)	inches (mm)			1/2 (12.7)				
		EV Kit			N/A				
List Price		£	tbc	515	525	539	559		

<sup>\*</sup> I : This value is under cooling opera



Model Name		ļ			Wall Mounted				
7710dGi 1 4dillo			ASYE04GACH	ASYE07GACH	ASYE09GACH	ASYE12GACH	ASYE14GACH		
Power Source			230v ~ 50Hz						
	UK Total Cooling		0.80	1.60	2.10	2.70	3.30		
	UK Sensible Cooling		0.70	1.60	1.90	2.30	2.80		
Capacity	UK Heating	KW	1.20	2.60	3.00	3.80	4.70		
	Nominal Cooling		1.10	2.20	2.80	3.60	4.50		
	Nominal Heating		1.30	2.80	3.20	4.10	5.00		
Input Power		Watts	12	15	16	21	34		
	High	1	450	490	500	460	680		
Airflow Rate	Med	m3/hr	370/440 htg/clg * 1	450	450	480	490		
	Low		300/420 htg/clg * 1	370/420 htg/clg * 1	370/420 htg/clg * 1	420	420		
	High		32	34	35	38	43		
Sound Pressure level	Med	dB(A)	26/31 htg/clg *1	32	32	34	35		
	Low		19/30 htg/clg * 1	26/30 htg/clg * 1	26/30 htg/clg * 1	30	30		
Dimensions (H x W x D)		mm			275 x 790 x 215				
Weight		kg			9				
Consideration of the	Liquid (flare)	:h()			1/4 (6.35)				
Connection pipe dia	Gas (flare)	inches (mm)			1/2 (12.7)				
		EV Kit		UTR-EVO9XB		UTR-E	V14XB		
List Price		£	tbc	543	553	568	589		

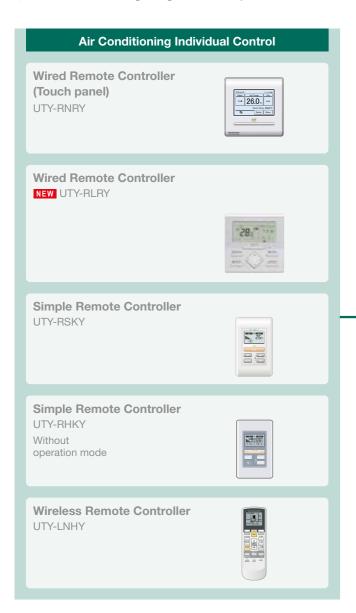
st 1 : This value is under cooling operation



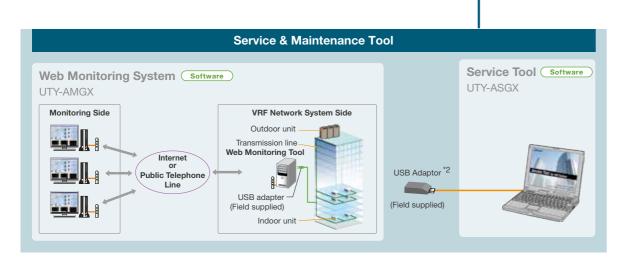
				Wall Mounted Large					
Model Name			ASYA18GACH	ASYA24GACH	ASYA30GACH				
Power Source			230v ~ 50Hz						
	UK Total Cooling		4.20	5.30	5.90				
	UK Sensible Cooling		3.50	4.60	5.10				
Capacity	UK Heating	KW	5.90	7.40	8.40				
	Nominal Cooling		5.60	7.10	8.00				
	Nominal Heating		6.30	8.00	9.00				
Input Power		Watts	32	60	91				
	High		840	1,100	1,240				
Airflow Rate	Med	m3/hr	770	910	980				
	Low		690	730	770				
	High		41	48	52				
Sound Pressure level	Med	dB(A)	39	43	45				
	Low		35	35	35				
Dimensions (H x W x D)		mm		320 x 998 x 228					
Weight		kg		15					
Constitution at a site	Liquid (flare)	inches (mm)		3/8 (9.52)					
Connection pipe dia	Gas (flare)	inches (mm)		5/8 (15.88)					
List Price		£	581	638	697				

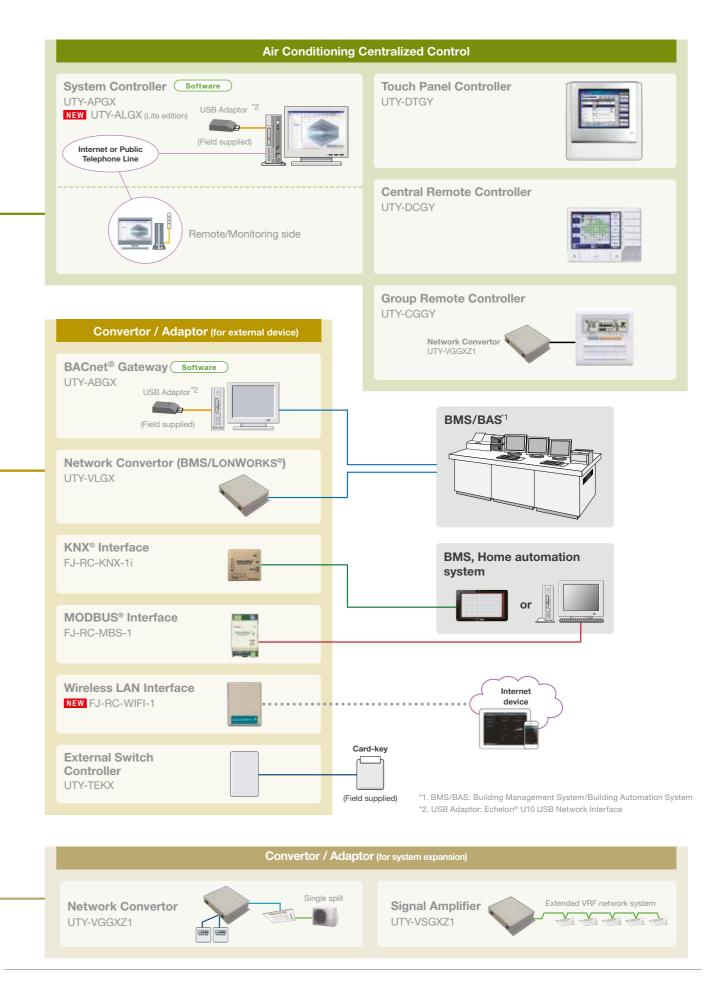
# **Control system overview**

User's needs are supported by offering a variety of controls, such as individual control, central control and building management control options.









# **Comparison table of controllers**

Iten	ltem		Wired Remote Controller	Simple Remote Controller	Simple *   Remote Controller	Wireless Remote Controller	Group Remote Controller	Central Remote Controller	Touch Panel Controller	System Controller (Software)	System Controller (Software
Mod	del name	260.	28.7	100		0.00	0.00				
		UTY-RNRY	UTY-RLRY	UTY-RSKY	UTY-RHKY	UTY-LNHY	UTY-CGGY	UTY-DCGY	UTY-DTGY	UTY-ALGX	UTY-APGX
Max	controllable remote controller groups	1	1	1	1	1	8	100	400	400	1600
Max	. controllable indoor units	16	16	16	16	16	128	100	400	400	1600
Max	controllable groups	-	-	-	-	-	-	16	400	400	1600
	On / Off	•	•	•	•	•	•	•	•	•	•
_	Operating mode setting	•	•	•	-	•	•	•	•	•	•
Air conditioning control function	Fan speed setting	•	•	•	•	•	•	•	•	•	•
Ē	Room temp. setting	•	•	•	•	•	•	•	•	•	•
重	Room temp. set point limitation	•	•	-	-	-	-	•	•	•	•
5	Test operation	•	•	•	-	•	-	•	•	-	-
ning	Up/down air direction flap setting	•	•	-	-	•	-	•	•	•	•
₽	Right/left air direction flap setting	•	•	-	-	•	-	•	•	•	•
on o	Group setting	-	-	-	-	-	-	•	•	•	•
Ę	RC prohibition	-	-	-	-	-	-	•	•	•	•
`	Anti freeze setting	•	-	-	-	-	-	•	•	•	•
	Economy mode setting	•	•	-	-	•	-	•	•	•	•
	Failure	•	•	•	•	-	•	•	•	•	•
	Defrosting	•	•	•	•	-	-	•	•	•	•
	Current time	•	•	-	-	•	•	•	•	•	•
	Day of week	•	•	-	-	-	•	-	•	•	•
	R.C. prohibition	•	•	•	•	-	•	•	•	•	•
<u></u>	Cooling/heating priority	•	•	•	•	-	•	•	•	•	•
Display	Address display	•	•	•	•	-	•	•	•	•	•
Δ	Room temp	•	-	-	-	-	-	-	-	-	-
	Multi language	•	-	-	-	-	-	•	•	•	•
	Summer time	•	-	-	-	-	-	•	•	•	•
	Name registration	•	-	-	-	-	-	•	•	•	•
	Backlight	•	-	•	•	-	-	•	•	-	-
	2D Floor Layout/3D Building Display	-	-	-	-	-	-	-	-	-	•
	Schedule timer	Week	Week	-	-	-	Week	Week	Year	Year	Year
	On/off, Temp, Mode, Times per day	8	4	-	-	-	4	20	20	144	144
	On/off timer	•	•	-	-	•	-	-	-	-	-
Timer	Sleep timer	-	-	-	-	•	-	-	-	-	-
Ę	Program timer	-	-	-	-	•	-	-	-	-	-
	Auto off timer	•	•	-	-	-	-	-	-	-	-
	Day off	•	•	-	-	-	-	•	•	•	•
	Min. unit of timer setting (Minutes)	10 · 30	30	30	30	5	10	10	10	10	10
	Status monitoring system	-	-	-	-	-	-	•	•	•	•
	Electricity charge apportionment	-	-	-	-	-	-	-	-	0	•
_	Error history	•	•	•	•	-	•	•	•	•	•
Control	Emergency stop	-	-	-	-	-	-	• *2	• *2	-	-
3	Remote managment	-	-	-	-	-	-	-	-	0	•
	Energy saving management	-	-	-	-	-	-	-	-	0	0
	E-mail notification for malfunction	-	-	-	-	-	-	-	-	•	•
	Key lock	Child Lock	Child Lock	-	-	-	Child Lock	Password Settina	Password Setting	Password Settina	Password Setti

<sup>\*1 &</sup>quot;Operation mode" setting is not available for this model.

Supported: 
Supported Soon: O Not Supported:

# Wired Remote Controller (Touch Panel): UTY-RNRY

Easy operation by high-definition large STN-LCD touch panel screen

- Easy finger touch operation with LCD panel
- Built-in weekly/Daily timer(ON/OFF,Temp.,Mode)
- Backlight enables easy operation in a darkened room
- Room temperature display
- Control up to 16 indoor units
- Corresponds to 7 different languages (English, Chinese, French, German, Spanish, Russian, Polish)
- 2-wire type

# High performance and compact size

In addition to the individual control, various energy saving controls can be realized using one remote controller only.

# Individual + Thermo control + Weekly timer + Auto off timer →

# **Accurate and comfortable control**

Indoor temperature can be detected accurately by the inclusion of a thermo sensor in the body of the wired controller.

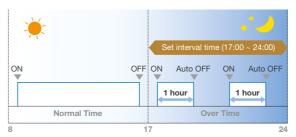
Cool 26.0<sub>°C</sub> Auto



# Various energy saving control

# **Auto OFF timer**

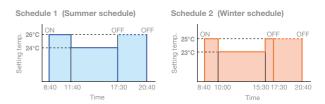
- The indoor unit automatically is turned off when it reaches to the preset operating time frame.
- The time frame of the "Auto off timer" can be flexibly scheduled.
- Can be set off time 30 ~ 240 minutes



Ex.) At interval time hour (17:00 to 24:00) to prevent forgetting to turn off Set off time : 1 hour

# 2 schedules Weekly Timer

- 2 schedules such as for the summer and winter can be set.
- 8 setting changeable per day of week (Setting items: On/Off, Temperature, Mode, Time)



# **Set Temperature Auto Return**

The setting temperature automatically returns to the previous setting temperature. The time range in which the set temperature can be changed is 10 to 120 minutes.

# **Set Temperature Upper and Lower Limit Setting**

The set temperature range can be set for each operation mode. (Cooling / Heating / Auto)

# **Specifications**

Model Name	UTY-RNRY
Power Supply	DC 12V
Dimensions (HxWxD) mm	120x120x20.4
Weight (g)	220
List Price	200

DC12V is supplied by the indoor unit.

<sup>\*2</sup> This function is available only through external input. control.

Wired Remote Controller: UTY-RLRY
Available Summer 2014

- Various timer setup (ON / OFF / WEEKLY) are possible.
- The room temperature can be controlled by detecting the temperature accurately with Built-in thermo sensor.
- When a failure occurs, the error code is displayed.



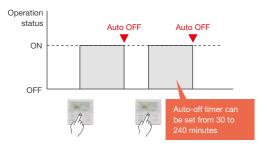
# High performance and compact size

In addition to the individual control, weekly timer, and various energy saving controls can be realized using only one remote controller.



## **Auto-off timer**

• The indoor unit automatically turns off after a set time has passed.



# **Weekly timer function**

• Not only time setting On / Off, but also setting of the operation mode and set temperature can be set by Weekly timer function.

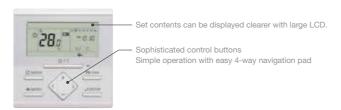


4 types (ON, OFF, ON, OFF) can be set on every day of the week in a week.

# 28.g = -0.30 12 NOON - 5872M

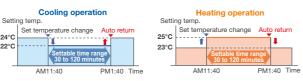
# High visibility and easy operation

- "Mode", "Set Temp", and "Fan" are displayed at large size on the top screen.
- Each function to be set is indicated by an icon.
- Control guide is displayed and operation is simple and straightforward.



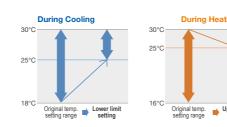
# Set temperature auto return

- The setting temperature automatically returns to the previously set temperature.
- The time range in which the set temperature can be changed is 30 to 120 minutes.



# Set temperature upper and lower limit setting

The set temperature range can be set for each operation mode.
(Cooling / Heating / Auto)



# **Specifications**

Model Name	UTY-RLRY
Power Supply	DC 12V
Dimensions (HxWxD) mm	120x120x17
Weight (g)	170
List Price	POA

DC12V is supplied by the indoor unit.

# Wired Remote Controller: UTY-RNKY

The room temperature can be controlled by detecting the temperature accurately from the built-in sensor

- Simple operation with Built-in Weekly / Daily Timer.
- Control up to 16 indoor units.
- Up to 2 wired remote controllers can be connected to a single indoor unit.

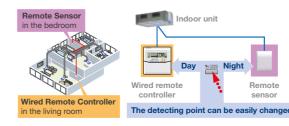




## Accurate and comfortable

Indoor temperature can be detected accurately by the inclusion of a thermo sensor in the body of the wired controller. This new wired remote controller and the optional remote sensor allows flexibility in sensor location, suitable for all requirements.

## Example of changing sensor



Displayed temperature is set temperature.

## **Built-in timers**

**Weekly timer:** Possible to set ON/OFF time to operate twice each day of the week.

**Setback timer:** Possible to set temperature for two times spans and for each day of the week.

At "Weekly timer" + "Set back timer" setup

# Diagnosis check function

Two methods are available for determining the cause of failure in the event of a malfunction occurs:

# Simple installation

Components are compatible with standard switch boxes. Flat back surface allows to be installed wherever it is needed.

# Simple Remote Controller:

UTY-RSKY / UTY-RHKY (Without operation mode)

Compact remote controller provides access to basic functions

- Up to 16 indoor units can be controlled with one remote controller.
- Suitable for hotels or offices as it is easily operated with no complex functions.





**User-friendly operation** 

- A large On / Off button is provided in the centre of the remote controller for easy operation.
- Background light enables easy operation in a darkened room.
- Following an error display, diagnostics can be carried out on the controller.



# **Functions**

Model	UTY-RSKY	UTY-RHKY
On /Off	•	•
Fan Control	•	•
Operation Mode	•	- * ]
Room Temp. Setting	•	•

<sup>\*1: &</sup>quot;Operation Mode" setting is not available. It is recomended to use together with other type of controller.

# Specifications

opoomounomo			
Model Name	UTY-RNKY	UTY-RSKY	UTY-RHKY
Power Source	DC 12V	DC 12V	DC 12V
Dimensions (HxWxD) mm	120x120x18	120x75x14	120x75x14
Weight (g)	160	90	90
List Price	100	80	75

DC12V is supplied by the indoor unit.

# Wireless Remote Controller: UTY-LNHY







Simple and sophisticated operations with a choice of 4 daily timers

•A single controller controls up to 16 indoor units.

# **Built-in timers**

# Select from 4 different timer programs:

On / Off / Program / Sleep

**Program timer:** The program timer operates the ON and OFF timer once within a 24 hour period.

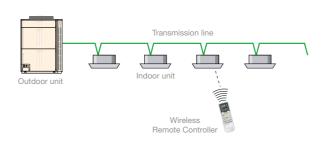
**Sleep timer:** The sleep timer function automatically corrects the set temperature according to the time setting to prevent excessive cooling or heating during sleep hours.

# **Easy installation and operation**

- ${}^{\bullet}\text{Code}$  selector switch prevents indoor unit mix-up. (Up to 4 codes can be set.)
- •Wide and precise transmitting range.

# System addressing

During installation work, system addressing can be performed using the Wireless Remote Controller, thus eliminating manual switch setting.



## IR Receiver Unit: UTB-YWC

Duct type ind

Wireless
Remote Controller

Necessary to control for all duct type by Wireless Remote Controller



# **Specifications**

Model Name	UTY-LNHY	UTB-YWC	UTY-LRHYB1	
Battery 1.5V (R03/LR03/AAA) x 2		DC 12V	DC 12V	
Dimensions (HxWxD) mm 170x56x19		145x90x30	193.9x193.9x31.2	
Weight (g)	85	150	140	
List Price	45	73	73	

DC12V is supplied by the indoor unit.

# **Group Remote Controller :** UTY-CGGY

Group control of indoor units with simple operation

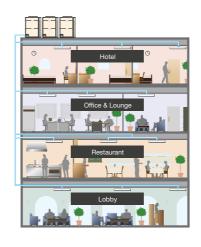
- •Up to 8 remote controller groups can be controlled by one Group Remote Controller.
- Up to 64 Group Remote Controllers can be connected in one VRF network system.
   Network Convertor is required to connect Group Remote Controllers to a VRF network system.
   (Network Convertor allows up to 4 Group Remote Controllers)

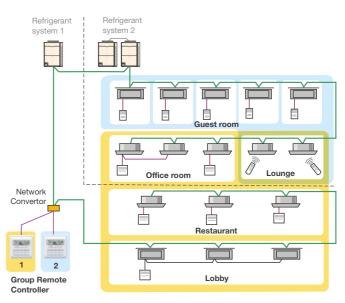




# Control up to 8 remote controller groups

•Single Group Remote Controller controls and monitors up to 8 remote controller groups.





Group Remote Controller 1: To control office room, lounge, restaurant and lobby

Group Remote Controller 2: To control guest room and launge (7 remote controller groups)

# High performance and compact size

ON / OFF, Operating mode, Room temperature and Fan speed setting can be controlled / monitored centrally or individually.





# **Built-in weekly timers**

The weekly timer is provided as a standard function.

- The timer can be set up for up to 4 times per day. (On / Off, operating mode, set temperature)
- 2. Allows separate settings for each day of the week.

# Specifications

Model Name	UTY-CGGY
Power Supply	DC 12V
Dimensions (HxWxD) mm	120x120x18
Weight (g)	200
List Price	140

DC12V is supplied by the indoor unit.

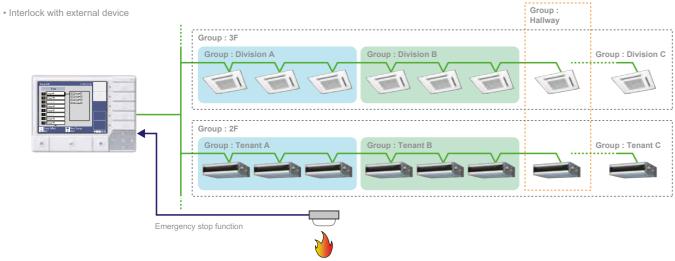
# Central Remote Controller: UTY-DCGY

Central Remote Controller fits small- and medium-sized buildings and tenants.

- Individual control and monitor of 100 indoor units
- 5 inch TFT color screen
- · High visibility and easy operation
- External input / output contact
- Detachable power supply unit
- · Corresponds to 7 different languages like English, Chinese, French, German, Spanish, Russian, Polish.
- 2-wire type

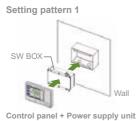
# System overview

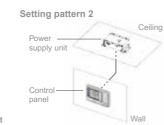
• It allows multiple indoor units grouping (Max.16 groups controlled)



# **Easy Installation**

- The control panel and power supply unit can be installed separately.
- For flexibility in installation, the Control panel can be built into the wall or fix on the wall.





# **Functions**

- Diverse control of indoor units Weekly timer
- Automatic clock adjustment Error history

# Specifications

Model Name	UTY-DCGY		
	Control Panel	Power Supply Unit	
Power Supply	DC 5 V	100-240V, 50-60Hz, Single Phase	
Dimensions (HxWxD) mm	120x162x25.7	99x135x39.2	
Weight (g)	308	355	
List Price	ice 1685		

Packing List	Control Panel / Power Supply Unit / Connecting cable, etc.

# **Touch Panel Controller:** UTY-DTGY

- •Large-sized 7.5-inch TFT color
- •LCD Easy finger touch operation
- •Stylish shape and design to suit all application
- •No additional component is required for installation
- •Up to 400 indoor units can be controlled
- •Selectable 2 display types (Icon / List) in monitoring mode
- •Corresponds to 7 different languages, English, Chinese, French, German, Spanish, Russian, Polish.

## 2-wire type

Easy operation

- Wide range of simple-to-understand icons
- Operation can be selected using your finger or the dedicated touch pen by pressing the appropriate on-screen icon
- Up-to-date status display
- · Background color identifies current control operation blue for monitoring, green for operational control

## **Functions**







hedule control Indoor units operation mor

# Automatic clock adjustment

The time setting of each controller can be set in batch automatically.



# Versatility

- Emergency stop function: Air conditioner can be turned off through the external input control
- The stored data can be transferred via USB port
- CSV format data edited by PC can be imported to Touch Panel Controller.



# Easy installation

- Touch Panel Controller is easily mounted to the wall.
- Flat back surface allows to be installed wherever it is needed.
- No additional component is required for installation.



# **Specifications**

Model Name	UTY-DTGY
Power Supply	100-240V, 50-60Hz, Single Phase
Dimensions (HxWxD) mm	260x246x54
Weight (g)	2,150
Interface	USB 2
List Price	3180

136  $\,$ 

System Controller: UTY-APGX Software

System Controller realizes the advanced integrated monitoring & control of VRF network system from small scale buildings to large scale buildings.

- Up to a maximum of 4 VRF network systems, 1600 indoor units, and 400 outdoor units can be controlled.
- In addition to air conditioning precision control function, central remote control, electricity charge calculation, schedule management, and energy saving functions are strengthened and building manager and owner needs are met.
- Corresponds to 7 different languages (English, Chinese, French, German, Spanish, Russian, Polish)





System Controller Lite has standard functions sufficient for air conditioner management in small and medium scale buildings.

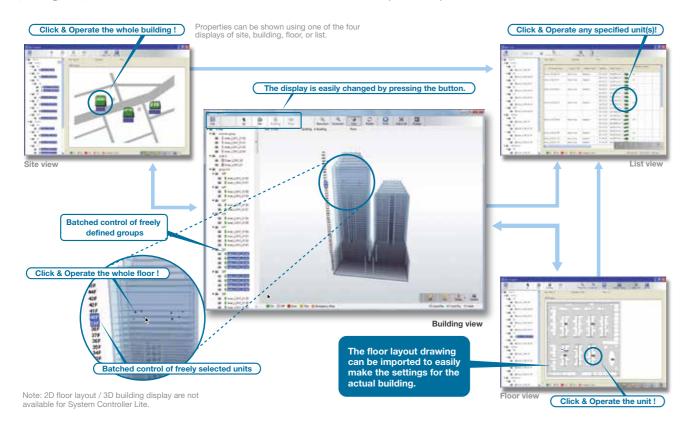
- Up to a maximum of 1 VRF network system, 400 indoor units, and 100 outdoor units can be controlled.
- In addition to air conditioning precision control function, a variety of management software is available as an option to give customoers a wide range of choice.
- Corresponds to 7 different languages (English, Chinese, French, German, Spanish, Russian, Polish)





# **High visibility and Easy operation**

- Click & Operate : The property is shown visually from the perspective most suitable for operation and operated accordingly (Click & Operate). You can select from among the 4 displays of site, building, floor, or list.
- Freely define groups for batched control: Indoor units can be freely grouped for simple batched control from a tree menu. Grouping by hierarchal structure, such as by section, division or department is possible.



# Diverse operation management & Data management Standard for System Controller and System Controller Lite

# **Schedule management**

- Annual schedules can be set for each remote controller group / user defined group.
- Start / stop, operating mode, remote controller prohibition, and temperature settings can be set up to 143 times per day at 10 minute intervals for up to 101 configurations for each remote controller group.
- Settings can be made for periods straddling midnight.
- Allows programming of special settings for holidays, including public holidays, for a complete
- Low noise operation of outdoor unit can be scheduled.



# **Error display & E-mail notification**

Error is notified with popup message, audible sound and E-mail real time when error occurs. Error for the past 1 year are logged and can be reviewed



# Operating & control record

Displays the history of operation status and control.



# Diverse control of indoor unit

- Indoor unit operation state, operation mode etc. are displayed
- Indoor unit start / stop and operation mode switching
- Room temperature set point limitation



# Data base import/export

Imports/exports registration data, layout data, and image data. Only the administrator can make this setting.



# Remote controller prohibition

This prohibits changes to the operation mode, temperature, start/stop, etc.



# **Automatic clock adjustment**

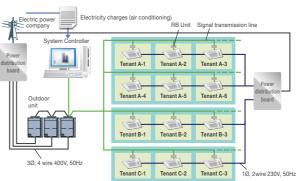
The time setting of each controller can be set in batch automatically.



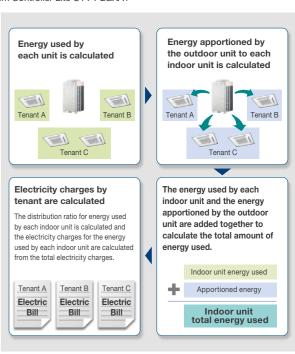
# **Electricity charge apportionment**

Electricity charge apportionment calculation framework Suppose you want to find the power consumed by the air conditioners of each tenant from the electricity charge for each month. With electricity charge apportionment function, used energy apportionment ratio will be provided, calculating in detail the energy consumed by the units used by each tenant. This information is then used to calculate the charges for the electricity consumed for air conditioning by each tenant from the total electricity charges in the bill from the electric power company. (See figure at right) The detailed calculation takes into consideration such things as unused rooms and nighttime electricity charges and shows them in a charges calculation sheet.

## System Configuration Example

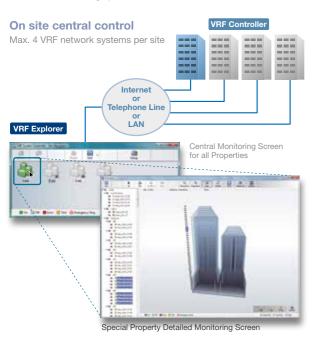


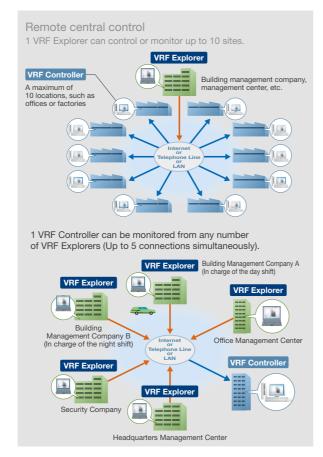
**Standard**) for System Controller Option for System Controller Lite UTY-PLGXA1



Remote management Standard for System Controller **Option** for System Controller Lite UTY-PLGXR1

System Controller may be used on site or remotely over various networks for remote central control. System Controller requires 2 softwares working together. VRF Controller runs on site and communicate with VRF system. VRF Explorer runs remotely and provides user interface and communicate with the VRF Controller. VRF Controller and VRF Explorer program may run in a single PC or in different PCs separated by network. By using VRF Explorer software, one PC can perform central control of 10 VRF system sites with max. 20 buildings per site.





Energy saving management Option for System Controller UTY-PEGX **Option**) for System Controller Lite UTY-PLGXE1

A variety of energy saving operations can be set and managed depending on the season, weather, and time period. Excellent energy saving operation is performed while keeping users comfortable.

Energy saving graph data: This graph compares the electricity consumption with the previous month and previous year to make it easy to analyze the energy saving effect.

# **Peak cut operation**

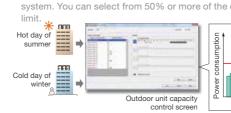
while shifting the indoor unit set temperature, set the indoor unit forced thermostat off, and taking other measures to carefully control the power consumed while maintaining comfort and conducting

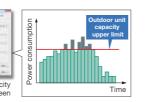
control to maintain the target power consumption set for each time. The indoor units to be controlled can be freely grouped and the control level

Forced thermostat off range (Use of average

# **Outdoor unit capacity save**

upper limit to suppress power consumption during hot summers and cold winters by averaging the power saving effect of each refrigerant





# **Indoor unit rotation operation**

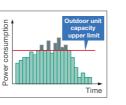
The operation of indoor units can be automatically rotated within a group in accordance with the set annual schedule to reduce power consumption while maintaining comfort. The indoor unit operation stoppage rate can be selected.



A power meter is connected to detect the total power consumption

Shows change in power consumption by time

Outdoor unit capacity save switches the outdoor unit capability system. You can select from 50% or more of the capacity upper



System Controller System Controler Lite UTY-APGX UTY-AIGX UTY-PLGXR1 UTY-PLGXA1 UTY-PEGX UTY-PLGXE 1 Specification Site Supervison 2D graphical layout view List display Tree display Group display Error Management History Individual Control Operation Control Individual Managemen Schedule tow noise mode veekly schedule
Remote monitoring
Remote operation control
Remote function setting
Apportionment charge/bill calculatio
Tenant (block) setting
Common facilities apportionment setti Management

O: Available. -: Not available. \*: Power calculation application software is necessary, please contact the local FGL representative.

Record of energy saving oper Energy saving information Power consumption monitor Electricity meter supported

Multi language

Charge Apportionment

Energy Saving

Others

	System Controller	System Controller Lite		
Operating System	Microsoft® Windows Vista® Home Premium (32-bit) SP2, Windows Vista® Business (32-bit) Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1, Windows® 7 Professional  Microsoft® Windows® 8 (32-bit or 64-bit), Windows® 8 Pro (32-bit or 64-bit)  Microsoft® Windows® 8.1 (32-bit or 64-bit), Windows® 8.1 Pro (32-bit or 64-bit) (Supported languages)  English, Chinese, French, German, Russian, Spanish, and Polish			
CPU	Intel® CoreTM i3 2 GHz or higher			
Memory	2 GB or more for (Windows Vista® and Windows® 7 (32-bit) 4 GB or more for (Windows® 7 (64-bit), Windows® 8, and Windows® 8.1)			
HDD	40 GB or more of free space			
Display	1024 x 768 or higher resolution			
Interface	Ethernet port (for getting access to the internet using LAN) or modem (for access to the internet using Public Telephone Line)  USB ports (Maximum 6 ports) (Required only for the Server PC that works as VRF Controller)  Maximum of 2 USB ports are required for WibuKey connection  Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface.  *Maximum number of required USB ports depends on the applicable system configuration.	Ethernet port (for getting access to the Internet using LAN) or Modern (for getting access to the Internet using Public Telephone Line)     USB ports (Maximum of 5 ports)     (Required only for the Server PC that works as VRF Controller)     - Maximum of 4 USB ports are required for WibuKey connection     1 USB port is required for Echelon® U10 USB Network Interface     The maximum number of required USB ports depends on the applicable system configuration.		
Accelerator	Microsoft® DirectX® 9.0c compatible			
Software	Adobe® Reader® 9.0 or later			
Optical Deive	DVD-ROM Drive			

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

	For System Controller		For System Controller Lite			
Туре		Option	System Controller	Option		
1700	System Controller	Energy Manager	Lite	Remote Access	Electricity Charge Apportionement	Energy Saving
Model name	UTY-APGX	UTY-PEGX	UTY-ALGX	UTY-PLGXR 1	ÚŤY-PLGXA 1	UTY-PLGXE1
DVD-ROM	1	1	1	-	-	-
WibuKey* 1 (Software protection key)	1	1	1	1	1	1

- \*1:Software protection key to be inserted in a USB slot running System Controller or System Controller Lite.

  System Controller or System Controller Lite may only run on a PC with Wibu Key. However, WibuKey is not required for remote VRF Explorer software.

# adaptor and convertor

# BACnet® Gateway: UTY-ABGX Software

- It is possible to connect medium to large sized BMS to VRF network system via BACnet®, a global standard for open networks.
- A maximum of 1600 indoor units with 4 VRF network systems (a maximum of 400 indoor units & 100 outdoor units for one network system) can be connected to one BACnet® Gateway.
- It is possible to control or monitor VRF network system from BMS via BACnet®
- Compatible with BACnet® (ANSI / ASHRAE-135-2004) application specific controller (B-ASC).
- Compatible with BACnet®/IP over Ethernet.
- Scheduling function, Alarm & Event functions as well as Electricity Change Apportionment function are provided in BACnet® Gateway.
- Connection between VRF network system to personal computer is possible via small U10 USB interface. However, both U10 USB interface & personal computer are field supplied items.
- Corresponds to 7 different languages, English, Chinese, French, German, Spanish, Russian, Polish.

(Field supplied)



DVD-ROM

(Software)

Software **Protection Key** 





## **Installation example** BACnet® Operato Workstation (B-ow VRF network system 1 **BACnet**® USB adaptor\*1 (Field supplied) Lighting facilities VRF network system 2 Security system USB adaptor 🕌 🦹 Automatic fire alarm interface (Field supplied) BACnet® Gateway B (UTY-ABGX) USB adaptor Ventilation system (Field supplied) Software USB adaptor

(Software) Protection Key

Max. 4 VRF network systems

# **Personal Computer Specifications**

\*1: USB adaptor is U10 USB Network Interface of Echelon® Corporation.

= Transmission line (VRF Network)

	UTY-ABGX
Operating System	<ul> <li>Microsoft® Windows Vista® Home Premium (32-bit) SP2, Windows Vista® Business (32-bit) SP2</li> <li>Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1, Windows® 7 Professional (32-bit or 64-bit) SP1</li> <li>Microsoft® Windows® 8 (32-bit or 64-bit), Windows® 8 Pro (32-bit or 64-bit)</li> <li>Microsoft® Windows® 8.1 (32-bit or 64-bit), Windows® 8.1 Pro (32-bit or 64-bit)</li> <li>Supported languages]</li> <li>English, Chinese, French, German, Russian, Spanish, and Polish</li> </ul>
CPU	Intel® CoreTM i3 2GHz or higher
Memory	<ul> <li>2 GB or more for Windows Vista® and Windows® 7 (32-bit)</li> <li>4 GB or more for Windows® 7 (64-bit), Windows® 8, and Windows® 8.1</li> </ul>
HDD	40 GB or more of free space
Display	1024 x 768 or higher resolution
Interface	Ethernet port (for getting access to the Internet using LAN)  USB ports (Maximum of 5 ports)  1 USB port is required for WibuKey connection  Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface  * Maximum number of required USB port numbers depend on the applicable system configurations.
Software Required	Adobe® Reader® 9.0 or later
Hardware Required	DVDROM Drive
List Price	2993

## Packing List

r dealing list		
Name and Shape		Application
DVD-ROM	1	Includes the software and manuals for BACnet® Gateway.
Wibu Key (Software protection key)	1	Software protection key to be connected to USB port on the BACnet®-installed PC. BACnet® Gateway runs only on a PC with WibuKey.

- Personal computer that satifies the following system requirements.
   Echelon® U10 USB Network Interface TP/FT-10 Channel (Model Number : 75010R) (Required for each VRF Network)

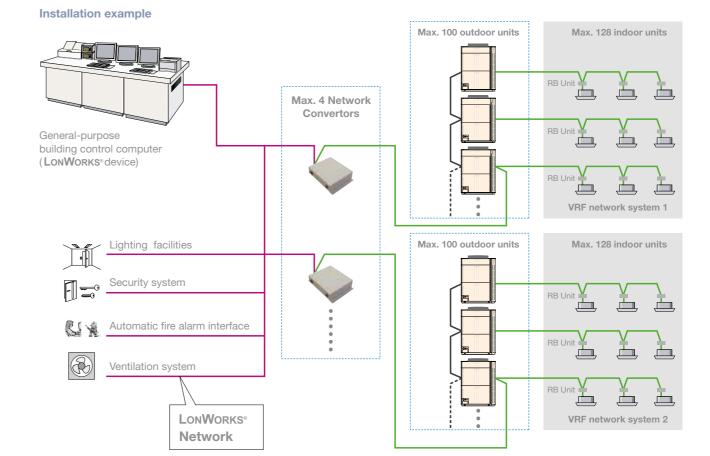
# Network Convertor for LonWorks®: UTY-VLGX

- •For connection between VRF network system and a LonWorks° open network for management of small to medium-sized BMS and VRF network system.
- •The UTY-VLGX permits central monitoring and control of a VRF network system from a BMS through &ONWORKS interface.
- •Up to 128 Indoor units can be connected to one Network Convertor followWorks









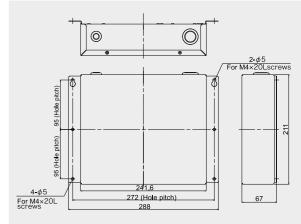
# **Specifications**

Model Name	UTY-VLGX
Power Supply	208-240V 50/60Hz, Single phase
Power Consumption (W)	4.5
Dimensions (HxWxD) mm	67 x 288 x 211
Weight (g)	1,500
List Price	2993

# **Transmission specifications (BMS side)**

Transmission speed	78 kbps
Transceiver	FT-X1 (Echelon® Corporation)
Transmission way form	Free topology
Terminal resistor	None (It attaches at the terminal of a network.)

# Dimensions (Unit:mm)



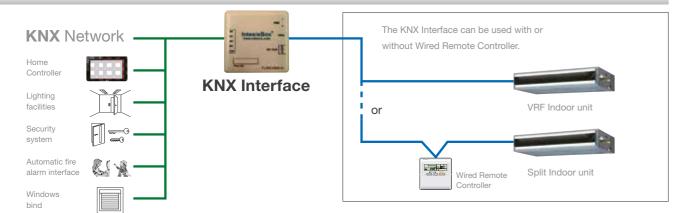
# adaptor and convertor



The KNX Interface allows a complete integration of air conditioners with KNX Network systems.

- •Simple installation due to small and compact size.
- •No separate external power supply required (just KNX bus power).
- •Can be used for single indoor units and group controlled (up to 16) indoor units.



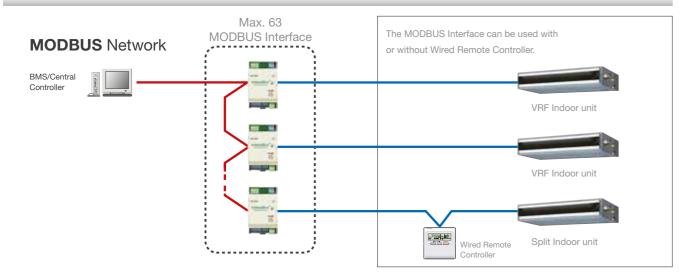


# MODBUS® Interface: FJ-RC-MBS-1

The MODBUS Interface allows a complete integration of air conditioners into MODBUS Networks.

- •Simple installation due to small and compact size.
- No separate external power supply required.
- •The MODBUS Interface permits central monitoring and control of air conditioners from BMS.



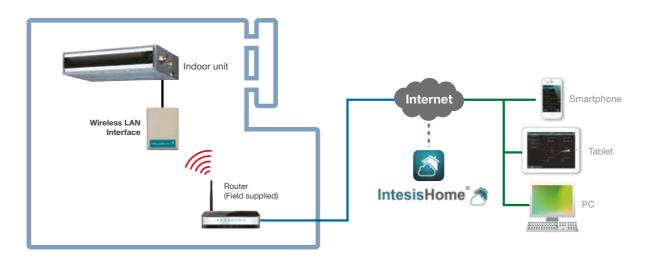


# Specifications

Model Name	FJ-RC-MBS-1
Dimensions (HxWxD) mm	93×53×58
Weight (g)	85
List Price	225

Model Name	FJ-RC-KNX-1i	
Dimensions (HxWxD) mm	70×70×28	
Weight (g)	70	
List Price	255	

# • It is the most advanced solution to remotely manage an Air Conditioning system using all sort of mobile devices such as Smartphones, Tablets and PC • No separate external power supply required • Can be used for single indoor units and group controlled (up to 16) indoor units





# **Basic control**

- Turning the units on and off
- Mode control (Heat, Cool, Dry, Auto, Fan)
- Fan speed setting
- Louver position (Airflow direction setting)
- Room temperature display
- Set temperature control
- Multi Language
- One Scene and Timer

# **Advanced control (Optional functions)**

- Climate working modes (ECO, Comfort, Powerful) (future release)
- Schedulable functionalities (ON/OFF, Modes, Set point temperature, Fan Speed, Louver position)
- Set temperature limitation (future release)
- Multiple Scenes & Timers and Calendar function

# **Notifications and history**

- Alerts e-mail notification (future release)
- Air conditioning malfunction alerts
- Connectivity monitoring and alerts
- History (future release)

# Specifications

Specifications	
Model Name	FJ-RC-WIFI-1
Dimensions (HxWxD) mm	70×108×28
Weight (g)	80
List Price	225

# adaptor and convertor

**Group of Single Split** 

## External Switch Controller: UTY-TEKX

Air conditioner switching can be controlled by connecting other sensor switches

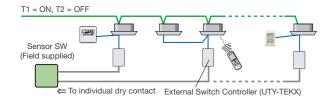
- •In combination with a field supply Card-Key Switch or other sensor, the External Switch Controller allows control of the ON / OFF, Room temperature, Fan speed and Master control functions. This makes this product suitable for installations such as hotel rooms
- •Card-key or other sensor switches are available as a field supplied parts.

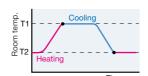


# **Installation example**

Auto mode operation, which switches the cooling and the heating automatically, is enabled by using the sensor switch and External Switch Controller.

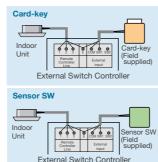
Note: All indoor units will operate in the same mode.





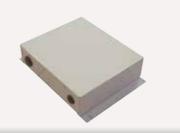
Please choose a thermosensor switch which can be set up for T1 and T2

Note 2. The remote controller's operation is prior to the auto mode operation.

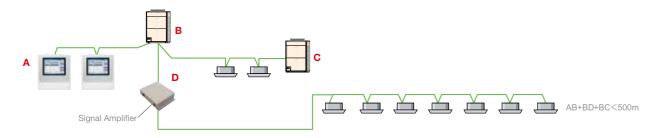


# Signal Amplifier: UTY-VSGXZ1

- •Transmission Line length can be extended up to 3,600m with multiple Signal Amplifiers.
- •Up to 8 signal amplifiers can be installed in a VRF network system.
- •A signal amplifier is required,
- (1) When the total wiring length of the transnission line exceeds  $500 \mathrm{m}$ .
- (2) When the total number of units on the transnission line exceeds 64.



# Installation example

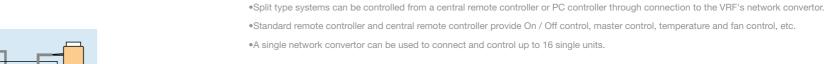


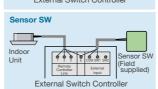
# **Specifications**

Model Name	UTY-TEKX
Power Supply	DC 12V
Dimensions (HxWxD) mm	93×53×58
Weight (g)	100
C12V is supplied by the indoor unit.	
List Price	87

Model Name	UTY-VSGXZ1
Power Supply	208-240V 50/60Hz, Single phase
Power Consumption	4.5
Dimensions (HxWxD) mm	67 x 288 x 211
Weight (g)	1,500
List Price	701

# **Electrical wiring**





# **Used for connecting Group Remote Controller**

System Controller

VRF network

system

system, irrespective of the number of connected single models.

Network Convertor: UTY-VGGXZ1

controller with the VRF network system

**Installation example** 

USB

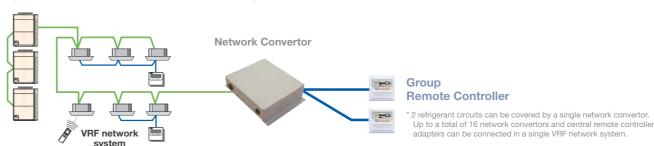
4 group remort controllers can be connected to a single Network convertor.

Please consult your distributor for connectable split type air conditioner. Up to 100 network convertors may be connected in a single VRF network system. A single network convertor is considered as a single refrigerant

•This network convertor is to be used for connecting single split system or group remote

**Network Convertor** 

•Please select the function by switching the dip switch during the installation.



Single Split

# **Specifications**

Opcomodition3	
Model Name	UTY-VGGXZ1
Power Supply	208-240V 50/60Hz, Single phase
Power Consummption	6.5
Dimensions (HxWxD) mm	67 x 288 x 211
Weight (g)	1,500
List Price	438

# service & maintenance

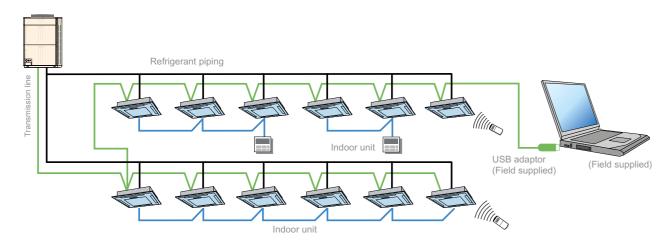
# Service Tool : UTY-ASGX

# Extensive monitoring and analysis functions for installation and maintenance

- •Operation status can be checked and analyzed to detect even the smallest abnormalities
- •Storage of data on system operation status on a PC allows access even from off site. •Up to 400 indoor units (a single VRF network system) can be controlled and monitored for large scale
- •This software can be connected to any point of transmission line with USB adaptor (field supplied).



# Wiring connection



# **Functions**

•Equipment Detail (Diagram)



- •Equipment Detail (List)
- •Error History
- •Remote File Download
- System List
- •Commissioning Tool

# **Personal computer specifications**

	UTY-ASGX
Operating System	<ul> <li>Microsoft® Windows Vista® Home Premium (32-bit) SP2, Windows Vista® Business (32-bit) SP2</li> <li>Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1</li> <li>Microsoft® Windows® 8 Pro (32-bit or 64-bit)</li> </ul>
CPU	1GHz or higher
Memory	<ul> <li>For Windows Vista®, Windows® 7 (32-bit), and Windows® 8 (32-bit): 1 GB or more</li> <li>For Windows®7 (64-bit) and Windows® 8.1 (64-bit): 2 GB or more</li> </ul>
HDD	10GB or more of free space
Display	1024 x 768 or higher resolution
Interface	<ul> <li>2 USB ports</li> <li>1 USB port is required for WibuKey connection</li> <li>1 USB port is required for Echelon® U10 USB Network Interface</li> </ul>
Software Required	Internet Explorer® 8.0 or 9.0 or 10.0 / Adobe® Reader® 9.0 or later
Hardware Required	DVD-ROM Drive
List Price	700

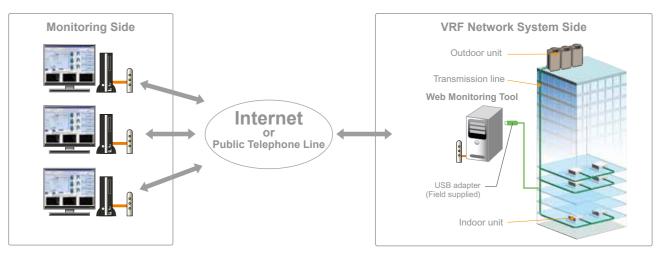
Packing List		
Name and Shape	Quantity	Application
DVD-ROM	1	Includes the software and manuals
Wibu Key (Software protection key)	1	Software protection key to be connected to USB port on the Service Tool-installed PC. These products runs only on a PC with WibuKey.

- Personal computer that satisfies the following system requirements
   Echelon® U10 USB Network Interface TP/FF-10 Channel (Model number: 75010R) (Required for each VRF Network.)

# Web Monitoring Tool: UTY-AMGX Software

- •Troubleshooting is performed by monitoring each air conditioning unit remotely during periodical system checks.
- •Error notification can be automatically transmitted to several locations using the internet\*
- •Requires either a dedicated internet connection or public telephone line.
- \*Determination of an error occurrence can be made through error warnings and equipment status information obtained from a remote
- •The monitoring data in a remote side can be optionally downloaded. And, this data can be displayed in offline mode of the service tool.
- •Monitoring side computer is not required to install special software, requires only general web browser.

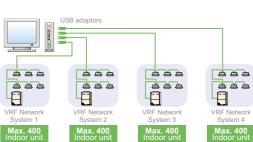
# **Web Monitoring System**



# **Support 4 VRF** network systems

Product features

USB adaptor (max. 4 adaptors per PC) permit, monitoring of up to 1,600 indoor units. Suitable for large-scale buildings or hotels.



# Personal computer specifications

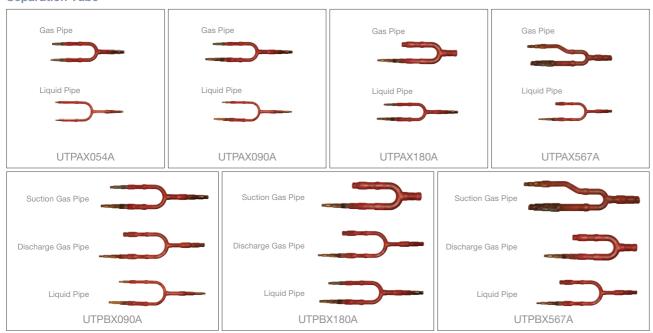
	UTY-AMGX
Operating System	<ul> <li>Microsoft® Windows Vista® Home Premium (32-bit) SP2, Windows Vista® Business (32-bit) SP2</li> <li>Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1</li> <li>Microsoft® Windows® 8 Pro (32-bit or 64-bit)</li> </ul>
CPU	1GHz or higher
Memory	<ul> <li>For Windows Vista®, Windows® 7 (32-bit), and Windows® 8 (32-bit): 1 GB or more</li> <li>For Windows® 7 (64-bit) and Windows® 8 (64-bit): 2 GB or more</li> </ul>
HDD	40GB or more of free space
Display	$1024 \times 768$ or higher resolution
Interface	Ethernet port (for getting access to the Internet using LAN) or Modem (for getting access to the Internet using Public Telephone Line) USB ports (Maximum of 5 ports) 1 USB port is required for WibuKey connection Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface Required maximum USB port numbers depend on the applicable system configurations.
Software Required	Internet Explorer® 8.0 or 9.0 or 10.0 / Adobe® Reader® 9.0 or later
Hardware Required	DVD-ROM Drive
List Price	2968

Packing List					
Name and Shape	Quantity	Application			
DVD-ROM	1	Includes the software and manuals			
Wibu Key (Software protection key)	1	Software protection key to be connected to USB port on the Service Tool-installed PC. These products runs only on a PC with WibuKey.			

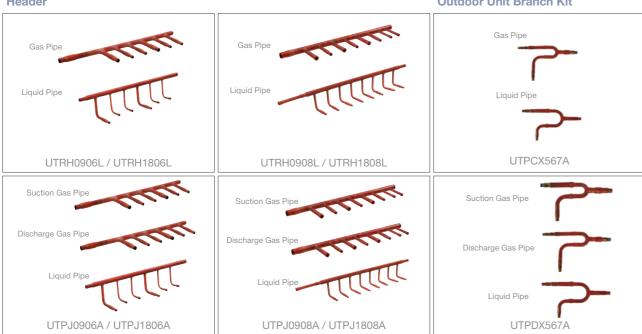
- Personal computer that satisfies the following system requirements
   Echelon® U10 USB Network Interface TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

# optional parts for VRF

# **Connection Units Separation Tube**



# Header Outdoor Unit Branch Kit



# EV Kit RB Unit







# **Specifications**

# **Separation Tube**

Model name	UTPAX054A (for J-IIS only)	UTPAX090A	UTPAX180A	UTPAX567A
Total cooling capacity of indoor unit (kW)	19.6 or less	28.0 or less	28.1 to 56.0	56.1 or more
List Price	51	59	87	151

Model name	UTPBX090A	UTPBX180A	UTPBX567A
Total cooling capacity of indoor unit (kW)	28.0 or less	28.1 to 56.0	56.1 or more
List Price	64	92	156

# Header

Model Name	3-6 Branches	UTRH0906L	UTRH1806L
Wodel Name	3-8 Branches	UTRH0908L	UTRH1808L
Total cooling capacity of indoor unit (kW)		28.0 or less	28.1 to 56.0
List Price		157 / 161	159 / 164

Model Name	3-6 Branches	UTPJ0906A	UTPJ1806A
/Wodel Name	3-8 Branches	UTPJ0908A	UTPJ1808A
Total cooling capacity of indoor unit (kW)		28.0 or less	28.1 to 56.0
List Price		210 / 220	215 / 225

# Outdoor unit Branch kit

Model name		UTPCX567A (for V-II)	UTPDX567A (for VR-II)
Number of Outdoor unit	2 outdoor units		1
Number of Ouldoor unit	3 outdoor units		2
List Price		151	156

# **EV** Kit

Model name	UTREV09XB	UTREV14XB
Application Model	ASYE04GACH ASYE07GACH ASYE09GACH	ASYE12GACH ASYE14GACH
List Price	76	76

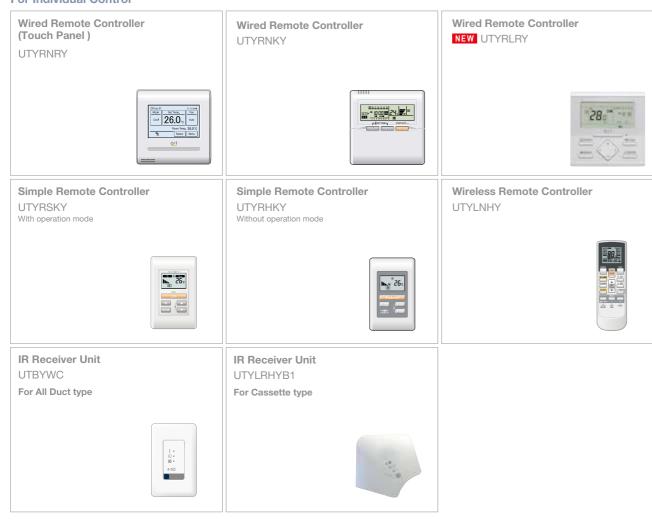
# **RB** Unit

Туре			Single type				
Model name		UTPRX01AH	UTPRX01AH UTPRX01BH UTPRX01CH		UTPRX04BH		
Power source		Single phase 230V, 50Hz					
Input power	W	17	24	31	96		
Number of branches		1	1	1	4		
Maximum capacity of connectable indoor units(Q)	kW	Q ≦ 8.0	Q ≦ 18.0	Q ≦ 28.0	Q \( \le 56.0 * 1		
Maximum capacity of connectable indoor units per branch(Q)	kW	Q ≦ 8.0	Q ≦ 18.0	Q ≦ 28.0	Q ≦ 18.0		
Maximum number of connectable indoor units per branch	е	3	8	8	8		
Dimensions (H×W×D) mm			198x298x268		260x658x428		
List Price		324	358	411	1293		

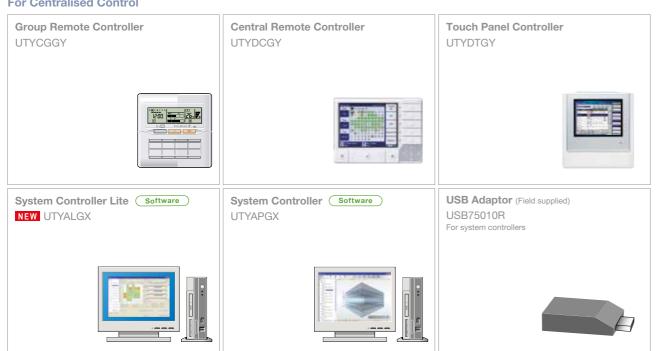
 $<sup>\</sup>star$  1: In case of two RB units connected in series ( total 8-branches ), maximum capacity of connectable indoor units is up to 56.0kW.

# optional parts for VRF

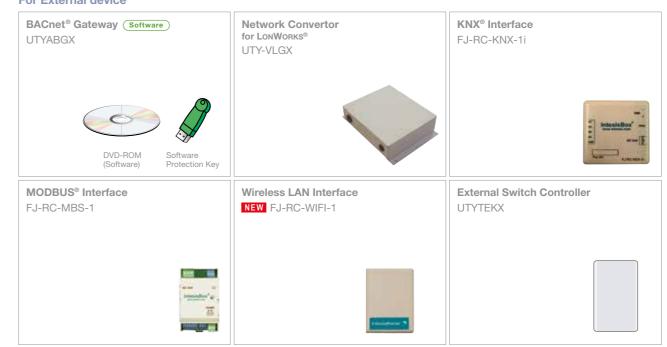
# Controllers **For Individual Control**



# **For Centralised Control**



# **Convertors / Adaptors** For External device



# For System Expansion



# **Panels For Cassette type**

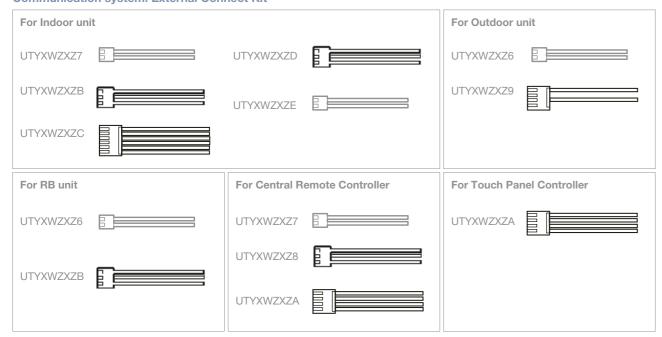


# Service



# optional parts for VRF

# Others Communication system: External Connect Kit



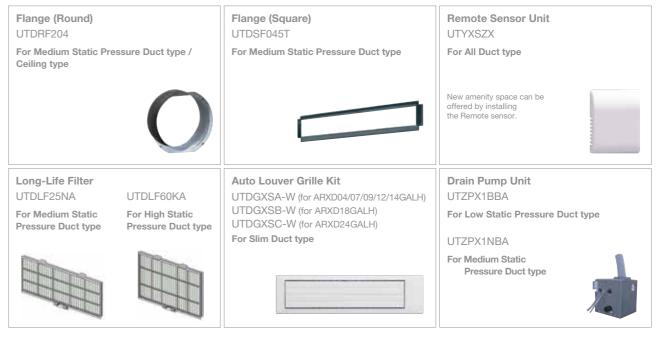
# **Function List**

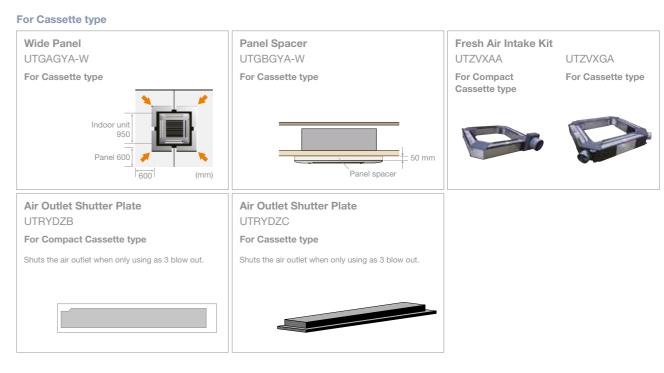
			Cont	roller	Other
	Indoor unit	Outdoor unit	Central Remote Controller	Touch Panel Controller	RB Unit
Operation / Stop	<ul><li>UTYXWZXZD</li><li>UTYXWZXZB</li></ul>	-	-	-	-
All On / All Off	-	-	• UTYXWZXZ7 • UTYXWZXZ8	-	-
Batch Stop	-	• UTYXWZXZ6	-	-	-
Forced Stop	UTYXWZXZD UTYXWZXZB	-	-	-	-
Emergency Stop	UTYXWZXZD UTYXWZXZB	• UTYXWZXZ6	UTYXWZXZ7     UTYXWZXZ8	-	-
Forced Thermostat off	• UTYXWZXZE • UTYXWZXZ7	-	-	-	-
Low Noise Mode Operation	-	• UTYXWZXZ6	-	-	-
Cooling / Heating Priority	-	• UTYXWZXZ6 * 1	-	-	• UTYXWZXZ6 • UTYXWZXZB
"Outdoor Unit Operation Peak Control"	-	• UTYXWZXZ6	-	-	-
"Power Usage Information from Electricity Meter"	-	• UTYXWZXZ6	-	-	-
Operation Status	• UTYXWZXZC	O UTYXWZXZ6	O UTYXWZXZA	O UTYXWZXZA	-
Error Status	• UTYXWZXZC	O UTYXWZXZ6	O UTYXWZXZA	O UTYXWZXZA	-
Indoor Unit Fun Operation Status	• UTYXWZXZC	-	-	-	-
Auxiliary Heater Output	• UTYXWZXZC *2	-	-	-	-
Base Heater	-	• UTYXWZXZ9	-	-	-

 $<sup>\ ^{\</sup>star}$  1 . Heat Pump type only  $\ ^{\star}$  2 . Duct type only

•: Dry Contact O: Apply Voltage

# For Duct type





# For Ceiling type



# fujitsu VRF list prices

		Nominal	2014	
Description	Part Number	Cooling Capacity	List Price	Comments
OUTDOOR UNITS - J-IIS (MINI-VRF)		kW	£	
tutdoor Unit	AIYA040LCLAH	12.1	£2,200	Available Summer 2014
Dutdoor Unit	AJYAO45LCLAH	14.0	£2,400	Available Summer 2014
Dutdoor Unit	AJYAO54LCLAH	15.1	£2,600	Available Summer 2014
OUTDOOR UNITS - J-II (MINI-VRF)				
Dutdoor Unit	AJYA40LALH	12.1	£3,266	
Outdoor Unit	AJYA45LALH	14.0	£3,581	
Dutdoor Unit	AJYA54LALH	15.5	£3,896	
OUTDOOR UNITS - V-II (2-PIPE)				
Dutdoor Unit	AJYA72LALH	22.4	£5,427	
Dutdoor Unit	AJYA90LALH	28.0	010,62	
Dutdoor Unit	AJY108LALH	33.5	£7,258	
Dutdoor Unit	AJY126LALH	40.0	£8,505	
Dutdoor Unit	AJY144LALH	45.0	£10,273	
OUTDOOR UNITS - VR-II (3-PIPE)				
Dutdoor Unit	AJYA72GALH	22.4	£5,672	
Dutdoor Unit	AJYA90GALH	28.0	£6,203	
Dutdoor Unit	AJY108GALH	33.5	£7,585	
Dutdoor Unit	AJY126GALH	40.0	£8,864	
Dutdoor Unit	AJY144GALH	45.0	£10,229	
COMPACT CASSETTE				
Compact Cassette	AUXB04GALH	1.1	£706	Price excludes grille, to be ordered separately
Compact Cassette	AUXB07GALH	2.2	£706	Price excludes grille, to be ordered separately
Compact Cassette	AUXB09GALH	2.8	£721	Price excludes grille, to be ordered separately
Compact Cassette	AUXB12GALH	3.6	£743	Price excludes grille, to be ordered separately
Compact Cassette	AUXB14GALH	4.5	£793	Price excludes grille, to be ordered separately
Compact Cassette	AUXB18GALH	5.6	£829	Price excludes grille, to be ordered separately
Compact Cassette	AUXB24GALH	7.1	9192	Price excludes grille, to be ordered separately
Grille for Compact Cassette	UTGUFYCW	-	£151	
CASSETTE				
Standard Cassette	AUXD18GALH	5.6	£771	Price excludes grille, to be ordered separately
Standard Cassette	AUXD24GALH	7.1	9839	Price excludes grille, to be ordered separately
standard Cassette	AUXA30GALH	9.0	0002	Price excludes grille, to be ordered separately
Standard Cassette	AUXA36GALH	11.2	21,050	Price excludes grille, to be ordered separately
Standard Cassette	AUXA45GALH	12.5	£1,125	Price excludes grille, to be ordered separately
Standard Cassette	AUXA54GALH	14.0	£1,195	Price excludes grille, to be ordered separately
Grille for Standard Cassette	UTGUGYAVV	-	£257	
COMPACT LOW STATIC DUCT (Horizontal / Vertical)				
Compact Duct 0-50pa	ARXB07GALH	2.2	£604	
Compact Duct 0-50pa	ARXB09GALH	2.8	£620	
Compact Duct 0-50pa	ARXB12GALH	3.6	£704	
Compact Duct 0-50pa	ARXB14GALH	4.5	£743	
Compact Duct 0-50pa	ARXB18GALH	5.6	£788	
SLIM DUCT (Horizontal / Vertical)				
Slim Duct with integrated Drain Pump 0-90pa	ARXD04GALH	1.1	2635	198mm high. Condensate pump for Horizontal use only.
lim Duct with integrated Drain Pump 0-90pa	ARXD07GALH	2.2	£635	198mm high. Condensate pump for Horizontal use only.
llim Duct with integrated Drain Pump 0-90pa	ARXD09GALH	2.8	1262	198mm high. Condensate pump for Horizontal use only.
Slim Duct with integrated Drain Pump 0-90pa	ARXD12GALH	3.6	£740	198mm high. Condensate pump for Horizontal use only.
Slim Duct with integrated Drain Pump 0-90pa	ARXD14GALH	4.5	£780	198mm high. Condensate pump for Horizontal use only.
Slim Duct with integrated Drain Pump 0-90pa	ARXD18GALH	5.6	£828	198mm high. Condensate pump for Horizontal use only.
Slim Duct with integrated Drain Pump 0-90pa	ARXD24GALH	7.1	6083	198mm high. Condensate pump for Horizontal use only.
MEDIUM STATIC DUCT				
Ned Static Duct 0-150pa	ARXB24GALH	7.1	£825	
Med Static Duct 0-150pa	ARXB30GALH	9.0	£942	
Med Static Duct 0-150pa	ARXB36GALH	11.2	1,061	
Ned Static Duct 0-150pa	ARXB45GALH	12.5	£1,179	
HIGH STATIC DUCT				
ligh Static Duct 100-200pa	ARXC36GATH	11.2	£1,273	
ligh Static Duct 100-250pa	ARXC45GATH	12.5	£1,414	
High Static Duct 100-250pa	ARXC60GATH	18.0	£1,556	
High Static Duct 100-300pa	ARXC72GATH	22.4	£1,711	
High Static Duct 100-300pa	ARXC90GATH	25.0	£1,882	
FLOOR / CEILING				
Floor / Ceiling	ABYA12GATH	3.6	£829	
Floor / Ceiling	ABYA14GATH	4.5	9692	
Floor / Ceiling	ABYA 18GATH	5.6	£922	
Floor / Ceiling	ABYA24GATH	7.1	£962	

Description	Part Number	Nominal Cooling Capacity kW	2014 List Price £	Comments
CEILING				
Ceiling	ABYA30GATH	9.0	£1,075	
Ceiling	ABYA36GATH	11.2	£1,187	
Ceiling	ABYA45GATH	12.5	£1,798	
Ceiling	ABYA54GATH	14.0	£2,406	
COMPACT WALL				
Compact Wall	ASYA04GACH	1.1	£467	EV Internal
Compact Wall	ASYA07GACH	2.2	£515	EV Internal
Compact Wall	ASYA09GACH	2.8	£525	EV Internal
Compact Wall	ASYA12GACH	3.6	£539	EV Internal
Compact Wall	ASYA14GACH	4.5	£559	EV Internal
Compact Wall - EV External	ASYE04GACH	1.1	£467	Price excludes EV Kit, to be ordered separately (UTREVO9XB)
Compact Wall - EV External	ASYE07GACH	2.2	£467	Price excludes EV Kit, to be ordered separately (UTREVO9XB)
Compact Wall - EV External	ASYE09GACH	2.8	£477	Price excludes EV Kit, to be ordered separately (UTREVO9XB)
Compact Wall - EV External	ASYE12GACH	3.6	£492	Price excludes EV Kit, to be ordered separately (UTREV14XB)
Compact Wall - EV External	ASYE14GACH	4.4	£513	Price excludes EV Kit, to be ordered separately (UTREV14XB)
EV Kit Model - Code "07/09"(for V2 Series)	UTREVO9XB	-	£76	
EV Kit Model - Code "12/14"(for V2 Series)	UTREV14XB	-	£76	
WALL				
Wall Mount	ASYA18GACH	5.6	£581	
Wall Mount	ASYA24GACH	7.1	£638	
Wall Mount	ASYA30GACH	8.0	£697	

# **ERV Units**

Description	Part Number	Nominal Cooling Capacity kW	2014 List Price £	Comments
OUTDOOR AIR UNITS				
Outdoor Air Unit 50-185pa	ARXH054GTAH	14.0	POA	Available Summer 2014
Outdoor Air Unit 50-200pa	ARXH072GTAH	22.4	POA	Available Summer 2014
Outdoor Air Unit 50-240pa	ARXH096GTAH	28.0	POA	Available Summer 2014

# fujitsu VRF list prices

ription	Part Number	Nominal Cooling Capacity kW	2014 List Price £	Comments	Description	Part Number	Nominal Cooling Capacity kW	20° List I
SSORIES	<u>'</u>				Fresh air Intake Kit	UTZVXAA		£450
less Remote Controller	UTYLNHY	-	£45		Fresh air Intake Kit	UTZVXGA		£350
Remote Controller	UTYRNKY	-	£100		Air Outlet Shutter Plate	UTRYDZB		POA
ed Remote Controller (Touch Panel)	UTYRNRY	-	£200		Air Outlet Shutter Plate	UTRYDZC		062
d Remote Controller	UTYRLRY	-	2100	Available Summer 2014	Input / Output Wire Adaptor	UTYXWZXZ6		£75
ole Remote Controller (with Master Control)	UTYRSKY	-	082		Input / Output Wire Adaptor	UTYXWZXZ7		082
ple Remote Controller (without Master Control)	UTYRHKY	-	£75		Input / Output Wire Adaptor	UTYXVVZXZ8		£70
oup Remote Controller	UTYCGGY	-	2140	Requires Network Converter UTY-VGGXZ1	Input / Output Wire Adaptor	UTYXWZXZ9		082
entral Remote Controller	UTYDCGY	-	£1,685		Input / Output Wire Adaptor	UTYXVVZXZA		£70
uch Panel Controller	UTYDTGY	-	23,180		Input / Output Wire Adaptor	UTYXWZXZB		082
tem Controller	UTYAPGX	-	£5,714	Software only	Input / Output Wire Adaptor	UTYXWZXZC		£70
rgy Saving Management Software	UTYPEGX	-	£2,350	Option for System Controller - WIBU key only	Input / Output Wire Adaptor	UTYXWZXZD		£70
tem Controller Lite	UTYALGX	-	£2,350	Software only	Input / Output Wire Adaptor	UTYXVVZXZE		£70
tricity Charge Module	UTYPLGXA 1	-	£700	Option for System Controller Lite - WIBU key only				
mote Access Module	UTYPLGXR1	-	£850	Option for System Controller Lite - WIBU key only	ERV Optional Parts			
nergy Saving Module	UTYPLGXE1		£850	Option for System Controller Lite - WIBU key only			Nominal	2014
B Adaptor	USB75010R		£450	Echelon USB adaptor for System Controller / Lite & Service Tool	Description	Part Number	Cooling Capacity	List Price
rvice Tool (Software)	UTYASGX	-	£700				kW	£
eb Monitoring Tool	UTYAMGX	-	£2,968	Requires site PC interfaced to VRF system(s)	ENERGY RECOVERY VENTILATOR			
nal Amplifier	UTYVSGXZ1	-	£701		Ventilator Unit	UTZBD025B	-	0862
etwork Convertor	UTYVGGXZ1	-	£438		Ventilator Unit	UTZBD035B	-	£840
etwork Convertor for "LONWORKS"	UTYVLGX	-	£2,993		Ventilator Unit	UTZBD050B	-	21,080
Onet Gateway	UTYABGX	-	£2,993	Software only	Ventilator Unit	UTZBD080B	-	£1,570

Network KNX Interface

Modbus Interface

Wireless LAN Interface

External Switch Controller

IR Receiver Unit for Duct RB Unit - A

RB Unit - B

RB Unit - C

RB Unit - 4 Branch

IU Separation Tube - IU Capacity 56.1kW or more (3P)

IU Separation Tube - IU Capacity 28.1 to 56.0kW (3P)

IU Separation Tube - IU Capacity 28.0kW or less (3P)

IU Separation Tube - IU Capacity 56.1kW or more (2P)

IU Separation Tube - IU Capacity 28.1 to 56.0kW (2P)

IU Separation Tube - IU Capacity 28.0kW or less (2P)

IU Separation Tube - IU Capacity 19.6kW or less (2P)

Header - 6 connections - IU Capacity 28.0kW or less (3P)

Header - 8 connections - IU Capacity 28.0kW or less (3P) Header - 8 connections - IU Capacity 28.0.1 to 56.0kW (3P)

Header - 6 connections - IU Capacity 28.0kW or less (2P)

Header - 8 connections - IU Capacity 28.0kW or less (2P)

Header - 6 connections - IU Capacity 28.0.1 to 56.0kW (2P)

Header - 8 connections - IU Capacity 28.0.1 to 56.0kW (2P)

Header - 6 connections - IU Capacity 28.0.1 to 56.0kW (3P)

Outdoor Unit Branch Kit (2P)

Remote Sensor Unit

Auto Louver Grille Kit Auto Louver Grille Kit

Air Outlet Shutter Plate

Air Outlet Shutter Plate

Drain Pump Unit

Drain Pump Unit

Flange (Round) for MSP Duct Indoor Unit

Flange (square) for MSP Duct Indoor Unit

Long Life Filter for MSP Duct Indoor Unit

FJRCKNX11

FIRCMBS 1

FJRCWIFI1

UTYTEKX

UTBYWC

UTPRXO1AH

UTPRXO1BH

UTPRX01CH

UTPRXO4BH

UTPBX567A

LITPRX 180A

UTPBX090A

UTRBP567X or UTPAX567A

UTRBPO90X or UTPAXO90A

UTPAXO54A

UTRCP567X or UTPCX567A

UTPDX567A

UTPJ0906A

UTPJ 1806A

UTPI1808A

UTRH0906L

UTRH1806L

UTRH0908L

UTRH1808L

UTYXSZX

UTDRF204

UTDSF045T

UTDLF25NA

UTDGXSAW

UTDGXSBVV

UTRYDZB

UTRYDZC

UTZPX1BBA

UTZPX 1 NBA

UTRDPB24T

£255

£225

£225

£87 £73

£73

£324

£358

£411

£1,293

£156

£92

£64

£151

£59

£51

£151

£156

£210

£215

£225

£157

£159

1612

£164 £54

230

£40

192

£130

£145

POA

062

POA

260

£45

O per ID unit or group of ID units (max 16)

1 per ID unit or group of ID units (max 16)

1 per ID unit or group of ID units (max 16)

Max 3 IUs, Q  $\leq$  8.0kW

Max 8 IUs, Q ≤ 18.0kW

Max 8 IUs. Q ≤ 28.0kW

Max 8 IUs, Q  $\leq$  18.0kW per branch, Q  $\leq$  56.0kW total

For the J-IIS systems only

For ARXDO4-14GALH

For ARXD18GALH

For Compact Cassette Type

For Low Static Pressure Duct Type

For Meduim Static Pressure Duct Type

Description	Part Number	Nominal Cooling Capacity kW	2014 List Price £	Comments
ENERGY RECOVERY VENTILATOR				
Ventilator Unit	UTZBD025B	-	0862	
Ventilator Unit	UTZBD035B	-	£840	
Ventilator Unit	UTZBD050B	-	21,080	
Ventilator Unit	UTZBD080B	-	£1,570	
Ventilator Unit	UTZBD 100B	-	£1,780	
ACCESSORIES				
DX-Kit - Control Unit	UTYVDGX	-	POA	for Air Handling Applications
DX-Kit - EEV Unit	UTPVX30A	-	POA	for Air Handling Applications 5.0kW, 6.3kW and 8.0kW
DX-Kit - EEV Unit	UTPVX60A	-	POA	for Air Handling Applications 10.0kW, 12.5kW and 14.0kW
DX-Kit - EEV Unit	UTPVX90A	-	POA	for Air Handling Applications 20.0kW, 25.0kW, 40.0kW and 50.0kW
DX-Kit - EEV Unit	2 x UTPVX90A	-	POA	for Air Handling Applications 40.0kW and 50.0kW



# Suppresses indoor temperature changes while providing fresh air

High efficiency and low noise are achieved using a highly efficient element. Comfortable air-conditioned environment is provided by effectively determining whether to use heat-exchange ventilation or normal ventilation while meeting diverse needs.



# Energy Recovery Ventilator

# **Energy saving ventilation**

Thanks to efficient recovery of thermal energy lost during Ventilation, you can save an air-conditioning fee.

# **Facility saving**

Thanks to a drastic reduction of load incurred by outside air, you can make air-conditioners more compact in parallel with the recovery of thermal energy.

# **Humidity adjusting effect**

In a cooling mode, a highly humid open-air is brought near to a dehumidified room atmosphere and then supplied. In a heating mode, a room humidity is transferred to the dry outside air and then supplied.

# **Sound shield effect**

The ducts of the unit and the heat exchange element are characteristic of sound shield effect, so that the office and store environment can be preserved.

# energy recovery ventilator

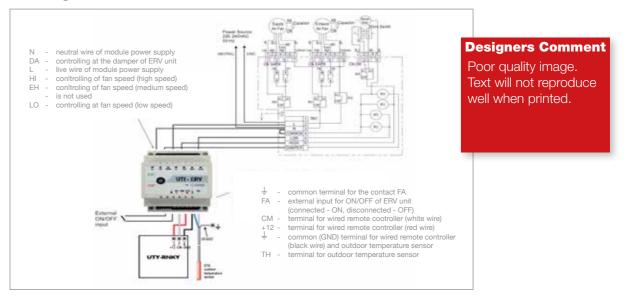
# Optional Handwired Controller Interface: UTI-ERV

In order to use a Fujitsu hard wired controller c/w time clock with the ERV units an interface is required. The UTI-ERV interface provides the following features:-

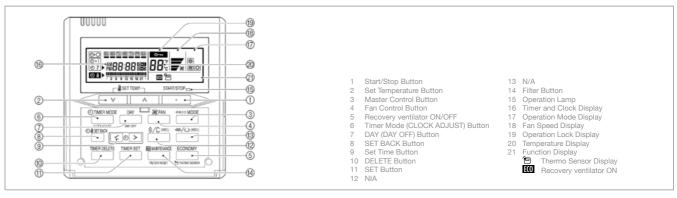
- UTI-ERV interface supplied with outside air intake duct sensor for control of the ERV bypass damper e.g. heat recovery or "free cooling" bypass mode.
- Dry contact terminals for remote on/off e.g. from BMS.
- · Allows the use of a Fujitsu UTY-RNKY hard wired controller which has the following features:-
- Allows ERV fan speed selection from remote controller Hi/Low (ERV HI/low fan speeds can also be changed by re-configuring the tapings on the fan motors).
- Controller has an integral 7 day programmable time clock.
- HW Controller has built in room temperature sensor and temperature selection.
- Filter clean indicator facility.
- Manual or Auto control of ERV bypass damper.



# Wired diagram



# Description of the buttons of remote controller



# **Specifications**

Specifications	
Model Name	UTI-ERV
Power Supply	208-240V 50/60Hz, Single phase
Power Consummption	6.5
Dimensions (HxWxD) mm	67 x 288 x 211
Weight (g)	1,500
List Price	000

# energy recovery ventilator

# UTZ-BD025B / UTZ-BD035B / UTZ-BD050B / UTZ-BD080B / UTZ-BD100B

Energy recovery ventilator unit offers maximum comfort and greater energy savings.



## **Features**



# Heat exchange ventilation and normal ventilation

# Heat exchange ventilation

When a room is cooled or heated, the exhausted cooling / heating energy is recovered by heat-exchange ventilation.

## Normal ventilation

This is used in the spring and autumn, when rooms are not cooled or heated, that is, when there is little difference between the indoor and outdoor air conditions. In addition, at night during the hot season, when the outside air temperature drops the outside air is drawn inside without heat exchange, alleviating the load on the air conditioning equipment.

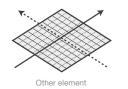
# **High Efficiency**

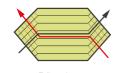
# **Energy efficiency and ecology**

20% Energy saving

Energy consumption is dramatically reduced by using a counter-flow heat-exchange element. Air conditioning load is reduced by approximately 20%, resulting in significant energy savings. Recovers up to 77% of the heat in the outgoing air.

# Features of heat exchange element





Fujitsu element (Counter-flow element)

With the cross-flow element, air moves in a straight line across the element. With the counter-flow element, air flows through the element for a longer time (longer distance), so the heat-exchange effect remains unchanged.

# **More Comfort**

# **Quiet operation**

Significantly reducing low pressure loss and noise allows low-noise operation.

# **Design Flexibility**

# Extended range of an external static pressure

An external static pressure is improved by adopting a powerful fan motor. This allows for application in a wide variety building.

# **Features**

# **Easy Installation and Maintenance**

## Slim shape and easier installation

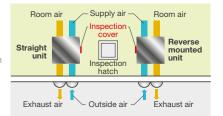
Counter-flow heat exchange element used for reduced noise and slimmer, more compact body shape.



# Reverse mountable direct air supply / exhaust system

Adoption of straight air supply / exhaust system: Duct design is simplified because the air supply / exhaust ducts are straight.

Since each unit can be mounted in reverse position, only one inspection hole is needed for two units: Two units car share one inspection hole so duct work is easier and more flexible.



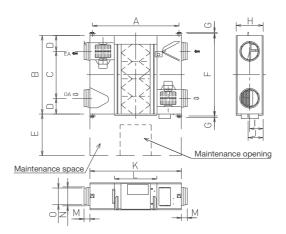
# Specifications

Rated	flow rate			250 m3/h	350 m3/h	500 m3/h	800 m3/h	1000 m3/h			
Model	No.			UTZBD025B	UTZBD035B	UTZBD050B	UTZBD080B	UTZBD100B			
Power s	ource				220 - 240V, 50Hz						
	Input power	(Extra high)/High/Low	W	128 / 123 / 96	190 / 185 / 168	289 / 225 / 185	418 / 378 / 295	464 / 432 / 311			
	Air flow rate	(Extra high)/High/Low	m3/h	250 / 250 / 190	350 / 350 / 240	500 / 500 / 440	800 / 800 / 630	1000 / 1000 / 700			
Φ	External static pressure	(Extra high)/High/Low	Pa	105 / 95 / 45	140 / 60 / 45	120 / 60 / 35	140 / 110 / 55	105 / 80 / 75			
at Exchange /entilation	Temperature Exchange Efficiency	(Extra high)/High/Low	%	75 / 75 / 77	75 / 75 / 78	75 / 75 / 76	75 / 75 / 76	75 / 75 / 79			
Heat E Venti	Energy Exchange Efficiency Cooling	(Extra high)/High/Low	%	63 / 63 / 65	66 / 66 / 71	62 / 62 / 64	65 / 65 / 68	65 / 65 / 70			
_	Energy Exchange Efficiency Heat pump	(Extra high)/High/Low	%	70 / 70 / 72	69 / 69 / 73	67 / 67 / 69	71 / 71 / 74	71 / 71 / 76			
	Sound pressure level	(Extra high)/High/Low	dB*	31.5 / 30.5 / 26.5	33 / 31 / 25.5	37.5 / 35.5 / 32.5	37.5 / 37 / 34.5	38.5 / 37.5 / 34.5			
_	Input power	(Extra high)/High/Low	W	128 / 123 / 96	190 / 185 / 168	289 / 225 / 185	418 / 378 / 295	464 / 432 / 311			
Normal Ventilation	Air flow rate	(Extra high)/High/Low	m3/h	250 / 250 / 190	350 / 350 / 240	500 / 500 / 440	800 / 800 / 630	1000 / 1000 / 700			
e P	External static pressure	(Extra high)/High/Low	Ра	105 / 95 / 45	140 / 60 / 45	120 / 60 / 35	140 / 110 / 55	105 / 80 / 75			
>	Sound pressure level	(Extra high)/High/Low	dB*	31.5 / 30.5 / 26.5	33 / 31 / 25.5	38.5 / 38 / 32.5	37.5 / 37 / 34.5	40.5 / 39.5 / 36.5			
Dimensi	ons	W×D×H	mm	882 x 599 x 270	1050 x 804 x 317	1090 x 904 x 317	1322 x 884 x 388	1322 x 1134 x 388			
Weight			kg	29	49	57	71	83			
Outlet duct diameter mm		150	150	200	250	250					
Operation range °C		-10 ~ 40	-10 ~ 40	-10 ~ 40	-10 ~ 40	-10 ~ 40					
Maximu	ximum humidity %		%	85	85	85	85	85			
List Pri	ice		£	680	840	1080	1570	1780			

<sup>\*</sup> The noise level must be measured 1.5 m below the centre of the unit.

# Dimensions Models: UTZ-BD025B / UTZ-BD035B / UTZ-BD050B / UTZ-BD080B / UTZ-BD100B

(Unit:mm)



	UTZBD025B	UTZBD035B	UTZBD050B	UTZBD080B	UTZBD100B
A	810	978	1018	1250	1250
В	599	804	904	884	1134
C	315	580	640	428	678
D	142	112	132	228	228
E	600	600	600	600	600
F	655	860	960	940	1190
G	19	19	19	19	19
н	270	317	317	388	388
ı	135	159	159	194	194
J	159	182	182	218	218
K	882	1050	1090	1322	1322
L	414	470	470	612	612
М	95	70	127	85	85
N	219	162	210	258	258
0	144	144	194	242	242

# energy recovery ventilator

# NEW ARXH054GTAH / ARXH072GTAH / ARXH096GTAH

The heat pump method efficiently processes the outdoor air for cooling and heating and supplies 100% fresh air into a room.





**Available Summer 2014** 

ARXH072GTAH



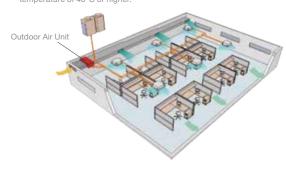
ARXH096GTAH

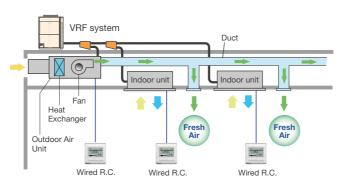
# **Features**

# One VRF system can provide air conditioning and air supply at the same time.

Outdoor Air Unit can be connected in a same VRF\*1 system as one of indoor unit series and can create fresh and comfortable air supply together from our high advanced

\*1. Connectable VRF series:J-IIS, J-II, V-II, VR-II In J-II series alone. OAU is prohibit to connect under the ambient temperature of 40°C or higher.





Make sure the connected capacity is within the range of 50% to 100% of the outdoor unit capacity. In addition, if there are mixed connections with indoor units, make the Outdoor Air Unit connection capacity 30% or less of the outdoor unit capacity.

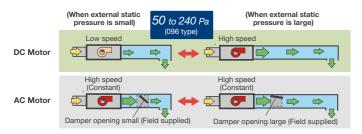
# High energy savings and flexible duct design by using DC motor

• Greatly reduces electricity consumption by adopting permanent magnet compared to when using an AC motor.



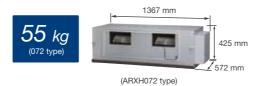
 Compared with AC motor. changing the speed makes it possible to respond flexibly to the external static pressure from 50 Pa to 240 Pa. Even if damper equipment is not used, static pressure can be adjusted and duct design is easy.

• Static pressure can be set easily using wired remote controller.



# Top class compact design

• Top class lightweight compact design at just 425 mm in height, 55 kg in weight for ARXH072 type. This unit can be installed easily even at narrow space.



# **Features**

# **Various Controllers**

Supplied variety of controllers as options, such as individual controller, central controller, and building management controller.

## **Individual Controller**



## **Central Controller**



<sup>\*</sup> The temperature setting is discharged air temperature setting. The air volume is set to a constant speed.

# **Specifications**

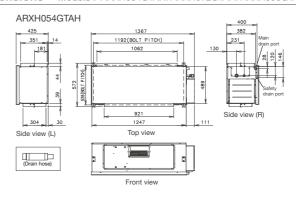
Model Name			ARXH054GTAH	ARXH072GTAH	ARXH096GTAH	
Power source		V/ Ø/Hz	230/1/50	230/1/50	230/1/50	
C	Cooling	kW	14.0	22.4	28.0	
Capacity	Heating	KVV	8.9	13.9	17.4	
Input Power	Cooling / Heating	kW	179	292	370	
Air flow rate		m3/h	1,080	1,680	2,100	
Static Pressure Standard (range)		Pa	185 (50-185)	200 (50-200)	200 (50-240)	
Sound pressure level		dB(A)	B(A) 42 44		47	
Dimensions (H x W x D)		mm	425×1,367×572 425×1,367×572		450×1,583×700	
Weight		kg	48	55	71	
Connection pipe diameter	(Small / Large)	mm	Ø9.52/Ø19.05	Ø12.70/Ø22.22	Ø12.70/Ø22.22	
O	Cooling	**	5 to 43	5 to 43	5 to 43	
Operation range	Heating *C		-7 to 21	-7 to 21	-7 to 21	
Refrigerant			R410A	R410A	R410A	
List Price		£	POA	POA	POA	

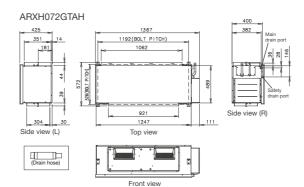
Note: Specifications are based on the following conditions.

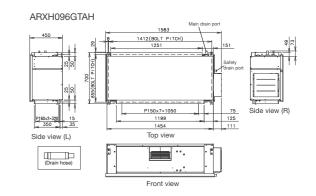
Cooling : Outdoor temperature of 33°CDB / 28°CWB. Heating: Outdoor temperature of 0°CDB / -2.9°CWB.

Pipe length: 7.5 m Voltage: 230 [V].

# **Dimensions** Models: ARXH054GTAH/ARXH072GTAH/ARXH096GTAH







# energy recovery ventilator

NEW Control unit: UTY-VDGX

NEW EEV unit: UTP-VX30A / UTP-VX60A / UTP-VX90A

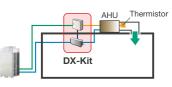
**Available Summer 2014** 

This kit can connect the general-purpose air handling unit (AHU) and the fan coil unit (FCU) to the VRF system.

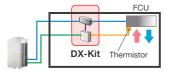


## **Features**

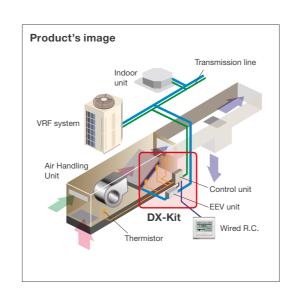
# Multiple temperature sensors optimally control the air handling unit and fan coil unit.



In case of connecting the air handling unit, the supply air temperature is controlled optimally by the discharge temperature control.

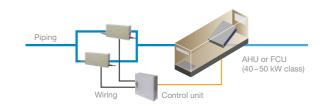


In case of connecting the fan coil unit, the room temperature is controlled optimally by the intake temperature control.



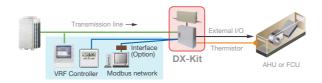
# Supports a wide range of capacity classes

- 2 EEV units can be connected in parallel and up to 20 HP (50 kW) large capacity units can be connected.
- Connectable capacity range: 5 kW to 50 kW



# A variety of controls to match the application

• Central control using our VRF controllers or central management controllers



· Central control from external controllers



## **Features**

# **Functions Summary**

# Inputs

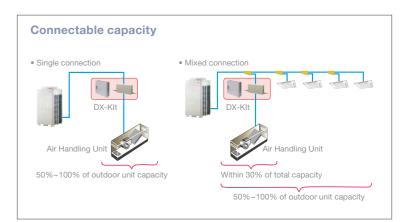
- ON/OFF
- Setting temperature
- Capacity demand
- Heating / Cooling operation mode
- Fault information

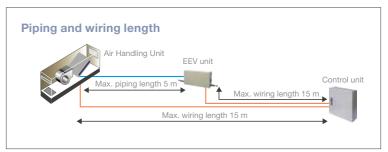
# Outputs

- ON/OFF indication
- Fan ON/OFF indication
- Thermo ON/OFF indication
- Defrost indication
- Fault indication

## **Installation Limitation**

- Connectable VRF series : J-IIS, J-II, V-II, VR-II
- Connectable DX-Kit system capacity range: 50 to 100% of the outdoor unit capacity
- Connectable DX-Kit system capacity range with indoor units: 30% or less of the outdoor unit capacity
- Max. wiring length from control unit: 15 m
- Max. piping length between EEV unit and indoor unit: 5 m
- Outdoor installation : Control unit (IP54 class) and EEV unit can be installed at an outdoor space.





## **Specifications**

Connectable Capacity		5.0kW	6.3kW	8.0kW	10.0kW	12.5kW	14.0kW	20.0kW	25.0kW	40.0kW	50.0kW	
C "	Cooling	kW	5.6	6.3	8.0	10.0	12.5	14.0	22.4	25.0	40.0	50.4
Capacity	Heating	KVV	6.3	7.1	9.0	11.2	14.0	16.0	25.0	28.0	45.0	56.5
Connectable Heat	Maximum	3	950	1070	1360	1700	2120	2380	3800	4250	6800	8500
Exchanger Volume	Minimum	cm <sup>3</sup>	760	860	1080	1350	1690	1890	3030	3380	5400	6750
Airflow Rate		m <sup>3</sup> /h	1060	1200	1520	1600	2000	2240	3560	4000	6400	8000

Control Unit		UTYVDGX						
Power source	V/Ø/Hz	230 / 1 / 50						
Dimensions ( $H \times W \times D$ )	mm	*						
List Price	£	POA						
EEV Unit		UTPVX30A	UTPVX60A	UTPVX90A	UTPVX90A×2			
Connection pipe diameter (Liquid)	mm	Ø9.53	Ø12.7	Ø12.7	Ø12.7			
Dimensions (H $\times$ W $\times$ D)	mm	*						

\*Data were not available at time of production.

Note: Specifications are based on the following conditions.

Cooling: Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating: Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

Pipe length: 7.5 m Voltage: 230 [V].

# feature explanation

## **Comfortable function**



## Human sensor

Human sensor catches movements of people in a room.



# Up / down swing flaps

The up/down flaps automatically swing up and down.



## Double swing automatic

Complex swing action of flaps enables automatically to swing both horizontal and vertical directions.



# Automatic air flow adjustment

The micro-computer automatically adjusts the air flow effectively to follow the changes of room temperature.



## Auto restart

In the event of a temporary power failure, the air conditioner will automatically restart in the same operating mode as before, once the power supply is restored.



# Auto-changeover

The unit automatically switches between heating and cooling modes based on your temperature setting and the room temperature.



# 10°C HEAT operation

The room temperature can be set to go no lower than 10°C, thus ensuring that the room does not get too cold when not occupied.



# Connectable distributing duct



# Connectable fresh air duct



## Fresh air intake

Fresh air can be taken in by a fan which can be connected using external control unit.



# Economy mode

Limits the maximum operation current, and performs operation with the power consumption suppressed.



# Powerful mode

Operation at maximum air flow and compressor speed, and quickly makes the room comfortable.



# Low Noise Mode

Sound noise level of outdoor unit can be selected.



# V-PAM control models



# i-PAM control models

## **Convenient function**



# Sleep timer

The micro-computer gradually changes the room temperature automatically to afford a comfortable night's sleep.



# Program timer

This digital timer allows selection of one of four options: ON, OFF, ON  $\rightarrow$ OFF or OFF  $\rightarrow$ ON.



# Weekly timer

Different on-off times can be set for each day.



# Weekly + setback timer

Weekly + Setback timer can set temperature for two times spans and for each day of the week.



# Filter sign

Indicates the filter cleaning period by lamp.

# **Clean function**



# Long-life ion deodorisation filter

The filter deodorises by powerfully decomposing absorbed odors using the oxidising and reducing effects of ions generated by ultra-fine-particle ceramic.



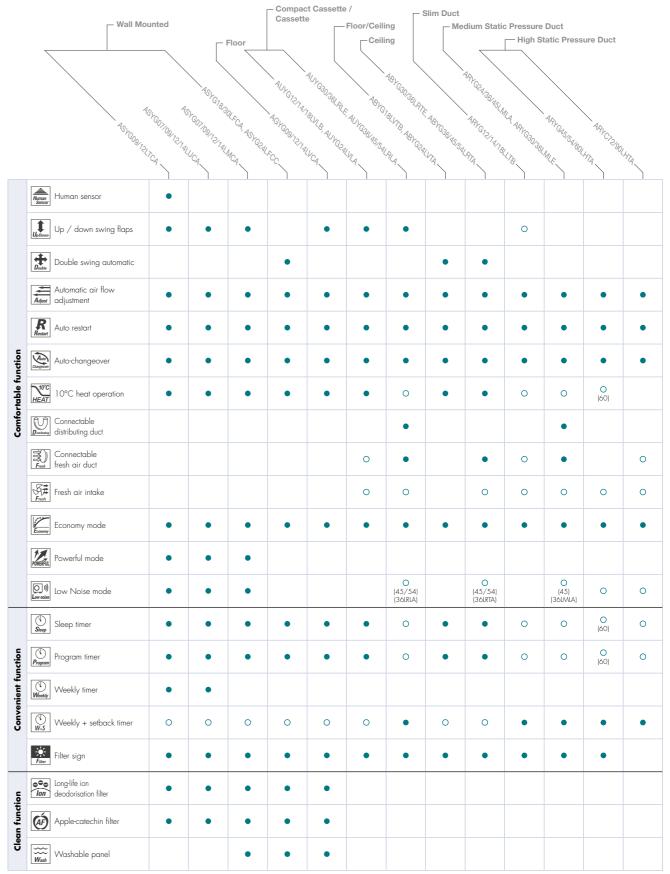
# Apple-catechin filter

Fine dust, invisible mold spores, and harmful microorganisms are absorbed into the filter by static electricity, and further growth is inhibited and deactivated by the polyphenol extracted from apples.



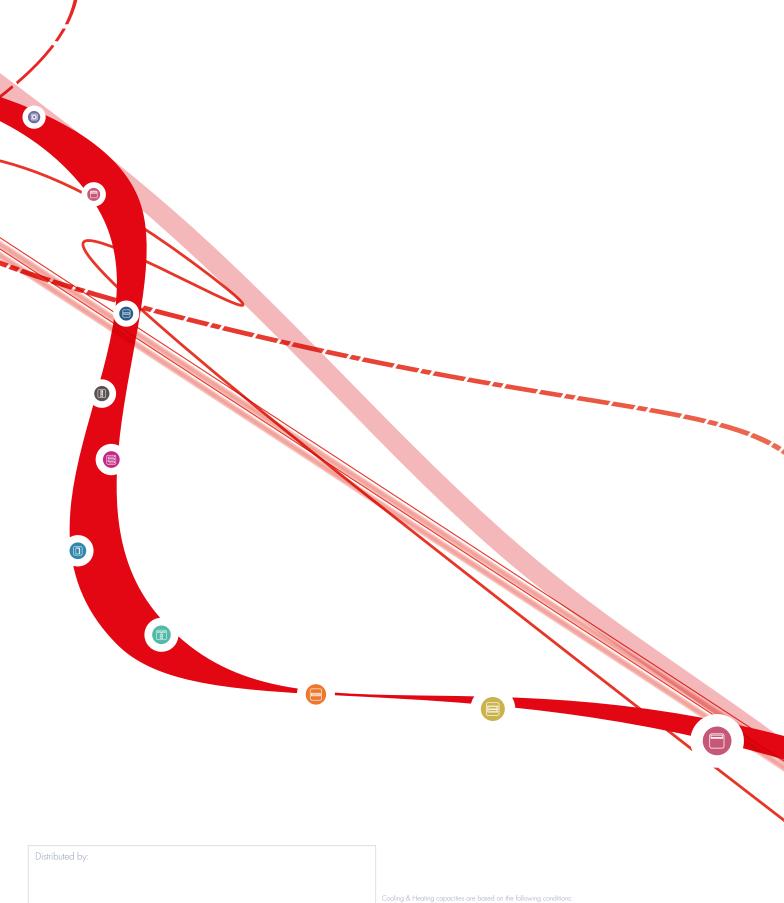
# Washable panel

# **Feature summary**



O: Optional function

notes



For full installation details contact FG Eurofred or your local distributor

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